



# STIC Search Report

EIC 1700

STIC Database Tracking Number: 154275

TO: John Hardee  
Location: REM 9A41  
Art Unit : 1751  
June 3, 2005

Case Serial Number: 10/738492

From: Usha Shrestha  
Location: EIC 1700  
REMSSEN 4B28  
Phone: 571/272-3519  
usha.shrestha@uspto.gov

## Search Notes

Jeff Bowsher  
513 627-4597  
Jerry Yetter  
6/29/05  
ms

12/30/02  
64d8210 c.p.  
c.p. 2554771  
6035774

Access DB# 154295

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: H. Caplan Examiner #: \_\_\_\_\_ Date: 5/24/05  
Art Unit: 175 Phone Number 30 2131-8 Serial Number: 10/738,492  
Mail Box and Bldg/Room Location: 9,441 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_ SCIENTIFIC REFERENCE BR  
Sci & Tech Inf. Cntr.

Inventors (please provide full names): \_\_\_\_\_  
MAY 24 RECD

Earliest Priority Filing Date: \_\_\_\_\_ Pat. & T.M. Office

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Whatever you can find.  
Thanks

\*\*\*\*\*

## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>Wta</u>	NA Sequence (#) _____	STN <u>615-87</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: <u>6/3/05</u>	Bibliographic _____	Dr.Link _____
Date Completed: <u>6/3/05</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>60</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: <u>30</u>	Patent Family _____	WWW/Internet _____
Online Time: <u>180</u>	Other _____	Other (specify) _____



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713
- Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

- Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

=> fil reg

FILE 'REGISTRY' ENTERED AT 17:10:42 ON 03 JUN 2005

=> d his ful

FILE 'HCAPLUS' ENTERED AT 14:00:55 ON 03 JUN 2005

L1 1 SEA ABB=ON PLU=ON US20040176269/PN  
D SCAN  
SEL RN

FILE 'REGISTRY' ENTERED AT 14:01:29 ON 03 JUN 2005

L2 31 SEA ABB=ON PLU=ON (10043-35-3/BI OR 10380-06-0/BI OR  
1314-13-2/BI OR 1332-07-6/BI OR 13770-90-6/BI OR  
16039-53-5/BI OR 2452-01-9/BI OR 2847-05-4/BI OR  
4468-02-4/BI OR 50-21-5/BI OR 526-95-4/BI OR 5329-14-6/  
BI OR 551-64-4/BI OR 553-72-0/BI OR 557-34-6/BI OR  
557-41-5/BI OR 56-84-8/BI OR 56-86-0/BI OR 64-18-6/BI  
OR 64-19-7/BI OR 65-85-0/BI OR 6915-15-7/BI OR  
7646-85-7/BI OR 7647-01-0/BI OR 7664-93-9/BI OR  
7697-37-2/BI OR 7699-45-8/BI OR 7733-02-0/BI OR  
7779-88-6/BI OR 7789-31-3/BI OR 87-69-4/BI)  
D SCAN  
E ZINC OXIDE/CN  
L3 1 SEA ABB=ON PLU=ON "ZINC OXIDE"/CN  
D RN  
L4 1 SEA ABB=ON PLU=ON 1314-13-2/RN  
D SCAN  
L5 1 SEA ABB=ON PLU=ON 50-21-5/RN  
L6 1 SEA ABB=ON PLU=ON 56-84-8/RN  
L7 1 SEA ABB=ON PLU=ON 56-86-0/RN  
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L10 1 SEA ABB=ON PLU=ON 87-69-4/RN  
L11 1 SEA ABB=ON PLU=ON 526-95-4/RN  
L12 1 SEA ABB=ON PLU=ON 5329-14-6/RN  
L13 1 SEA ABB=ON PLU=ON 6915-15-7/RN  
L14 1 SEA ABB=ON PLU=ON 7647-01-0/RN  
L15 1 SEA ABB=ON PLU=ON 7664-93-9/RN  
L16 1 SEA ABB=ON PLU=ON 7697-37-2/RN  
L17 1 SEA ABB=ON PLU=ON 7789-31-3/RN  
L18 1 SEA ABB=ON PLU=ON 10043-35-3/RN  
L19 14 SEA ABB=ON PLU=ON (L5 OR L6 OR L7 OR L8 OR L9 OR L10  
OR L11 OR L12 OR L13 OR L14 OR L15 OR L16 OR L17 OR  
L18)  
L20 1 SEA ABB=ON PLU=ON WATER/CN  
D RN  
L21 1 SEA ABB=ON PLU=ON 7732-18-5/RN  
L22 1 SEA ABB=ON PLU=ON 64-19-7/RN  
L23 15 SEA ABB=ON PLU=ON L19 OR L22  
L24 1 SEA ABB=ON PLU=ON 551-64-4/RN  
D SCAN  
L25 1 SEA ABB=ON PLU=ON 553-72-0/RN  
L26 1 SEA ABB=ON PLU=ON 557-34-6/RN  
L27 1 SEA ABB=ON PLU=ON 557-41-5/RN  
L28 1 SEA ABB=ON PLU=ON 1332-07-6/RN  
L29 1 SEA ABB=ON PLU=ON 2452-01-9/RN  
L30 1 SEA ABB=ON PLU=ON 2847-05-4/RN  
L31 1 SEA ABB=ON PLU=ON 4468-02-4/RN  
L32 1 SEA ABB=ON PLU=ON 7646-85-7/RN  
L33 1 SEA ABB=ON PLU=ON 7699-45-8/RN

L34 1 SEA ABB=ON PLU=ON 7733-02-0/RN  
 L35 1 SEA ABB=ON PLU=ON 7779-88-6/RN  
 L36 1 SEA ABB=ON PLU=ON 10380-06-0/RN  
 L37 1 SEA ABB=ON PLU=ON 13770-90-6/RN  
 L38 1 SEA ABB=ON PLU=ON 16039-53-5/RN  
 L39 15 SEA ABB=ON PLU=ON (L24 OR L25 OR L26 OR L27 OR L28  
 OR L29 OR L30 OR L31 OR L32 OR L33 OR L34 OR L35 OR  
 L36 OR L37 OR L38)

FILE 'HCAPLUS' ENTERED AT 15:09:50 ON 03 JUN 2005

L40 41945 SEA ABB=ON PLU=ON L39  
 L41 489820 SEA ABB=ON PLU=ON L23  
 L42 351611 SEA ABB=ON PLU=ON L21  
 L43 74504 SEA ABB=ON PLU=ON L4  
 L44 108 SEA ABB=ON PLU=ON L41 AND L42 AND L43  
 L45 58441 SEA ABB=ON PLU=ON (CLEAN? OR CLEANER? OR CLEANSER?  
 OR LAUND? OR DISHWASH? OR DETERG? OR ABSTERG?) (2A) (MIX?  
 OR BLEND? OR COMPOSIT? OR COMPN# OR COMPSN# OR  
 FORMULAT? OR SOLUTION? OR SOLN# OR LIQ# OR LIQUID#)  
 L46 1 SEA ABB=ON PLU=ON L44 AND L45  
 D SCAN  
 L47 161 SEA ABB=ON PLU=ON L40 AND L45  
 L48 1 SEA ABB=ON PLU=ON L47 AND L1  
 D QUE L46  
 L49 3620655 SEA ABB=ON PLU=ON L21 OR AQ# OR AQUEOUS? OR H2O OR  
 WATER?

FILE 'REGISTRY' ENTERED AT 15:55:40 ON 03 JUN 2005

L50 112 SEA ABB=ON PLU=ON (ZN(L)O)/ELS(L)2/ELC.SUB

FILE 'HCAPLUS' ENTERED AT 16:02:32 ON 03 JUN 2005

L51 75175 SEA ABB=ON PLU=ON L50  
 L52 82880 SEA ABB=ON PLU=ON (ZINC OR ZN) (W) (OXIDE? OR DIOXIDE?  
 OR TRIOXIDE?)  
 L53 93320 SEA ABB=ON PLU=ON L43 OR L51 OR L52  
 L54 1288 SEA ABB=ON PLU=ON L53 AND L41 AND L49  
 L55 14 SEA ABB=ON PLU=ON L54 AND L45  
 D SCAN TI  
 L56 57 SEA ABB=ON PLU=ON L40(L) L45  
 L57 39 SEA ABB=ON PLU=ON L56 AND DETERG?/SC  
 L58 1 SEA ABB=ON PLU=ON L57 AND L1  
 L59 37 SEA ABB=ON PLU=ON L57 NOT L55  
 D SCAN L55 TI  
 L60 2 SEA ABB=ON PLU=ON L55 AND DETERG?/SC  
 D SCAN  
 L61 39 SEA ABB=ON PLU=ON L57 OR L60  
 D SCAN TI  
 L62 124447 SEA ABB=ON PLU=ON ZNO OR (ZINC OR ZN) (W) (OXIDE? OR  
 DIOXIDE? OR TRIOXIDE)  
 L63 128781 SEA ABB=ON PLU=ON L43 OR L51 OR L62  
 L64 127 SEA ABB=ON PLU=ON L63 AND L41 AND L42  
 L65 0 SEA ABB=ON PLU=ON L64 AND DETERG?/SC  
 L66 3681 SEA ABB=ON PLU=ON L63 AND L41  
 L67 29 SEA ABB=ON PLU=ON L66 AND L45  
 L68 7 SEA ABB=ON PLU=ON L67 AND DETERG?/SC  
 D SCAN TI  
 L69 42 SEA ABB=ON PLU=ON L61 OR L68  
 L70 76 SEA ABB=ON PLU=ON L47 AND DETERG?/SC  
 D FHITSTR  
 L71 24 SEA ABB=ON PLU=ON L70 AND (DISH? OR DISH?(A)WASH?)

L72 53 SEA ABB=ON PLU=ON L69 OR L71  
D FHITSTR

FILE 'REGISTRY' ENTERED AT 17:10:42 ON 03 JUN 2005

FILE HCAPLUS

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=> d que 157

L24	1	SEA FILE=REGISTRY ABB=ON PLU=ON	551-64-4/RN
L25	1	SEA FILE=REGISTRY ABB=ON PLU=ON	553-72-0/RN
L26	1	SEA FILE=REGISTRY ABB=ON PLU=ON	557-34-6/RN
L27	1	SEA FILE=REGISTRY ABB=ON PLU=ON	557-41-5/RN
L28	1	SEA FILE=REGISTRY ABB=ON PLU=ON	1332-07-6/RN
L29	1	SEA FILE=REGISTRY ABB=ON PLU=ON	2452-01-9/RN
L30	1	SEA FILE=REGISTRY ABB=ON PLU=ON	2847-05-4/RN
L31	1	SEA FILE=REGISTRY ABB=ON PLU=ON	4468-02-4/RN
L32	1	SEA FILE=REGISTRY ABB=ON PLU=ON	7646-85-7/RN
L33	1	SEA FILE=REGISTRY ABB=ON PLU=ON	7699-45-8/RN
L34	1	SEA FILE=REGISTRY ABB=ON PLU=ON	7733-02-0/RN
L35	1	SEA FILE=REGISTRY ABB=ON PLU=ON	7779-88-6/RN
L36	1	SEA FILE=REGISTRY ABB=ON PLU=ON	10380-06-0/RN
L37	1	SEA FILE=REGISTRY ABB=ON PLU=ON	13770-90-6/RN
L38	1	SEA FILE=REGISTRY ABB=ON PLU=ON	16039-53-5/RN
L39	15	SEA FILE=REGISTRY ABB=ON PLU=ON	(L24 OR L25 OR L26 OR L27 OR L28 OR L29 OR L30 OR L31 OR L32 OR L33 OR L34 OR L35 OR L36 OR L37 OR L38)
L40	41945	SEA FILE=HCAPLUS ABB=ON PLU=ON	L39
L45	58441	SEA FILE=HCAPLUS ABB=ON PLU=ON	(CLEAN? OR CLEANER? OR CLEANSER? OR LAUND? OR DISHWASH? OR DETERG? OR ABSTERG?) (2A) (MIX? OR BLEND? OR COMPOSIT? OR COMPN# OR COMPSN# OR FORMULAT? OR SOLUTION? OR SOLN# OR LIQ# OR LIQUID#)
L56	57	SEA FILE=HCAPLUS ABB=ON PLU=ON	L40 (L) L45
L57	39	SEA FILE=HCAPLUS ABB=ON PLU=ON	L56 AND DETERG?/SC

=> d que 168

L4	1	SEA FILE=REGISTRY ABB=ON PLU=ON	1314-13-2/RN
L5	1	SEA FILE=REGISTRY ABB=ON PLU=ON	50-21-5/RN
L6	1	SEA FILE=REGISTRY ABB=ON PLU=ON	56-84-8/RN
L7	1	SEA FILE=REGISTRY ABB=ON PLU=ON	56-86-0/RN
L8	1	SEA FILE=REGISTRY ABB=ON PLU=ON	64-18-6/RN
L9	1	SEA FILE=REGISTRY ABB=ON PLU=ON	65-85-0/RN
L10	1	SEA FILE=REGISTRY ABB=ON PLU=ON	87-69-4/RN
L11	1	SEA FILE=REGISTRY ABB=ON PLU=ON	526-95-4/RN
L12	1	SEA FILE=REGISTRY ABB=ON PLU=ON	5329-14-6/RN
L13	1	SEA FILE=REGISTRY ABB=ON PLU=ON	6915-15-7/RN
L14	1	SEA FILE=REGISTRY ABB=ON PLU=ON	7647-01-0/RN
L15	1	SEA FILE=REGISTRY ABB=ON PLU=ON	7664-93-9/RN

L16 1 SEA FILE=REGISTRY ABB=ON PLU=ON 7697-37-2/RN  
 L17 1 SEA FILE=REGISTRY ABB=ON PLU=ON 7789-31-3/RN  
 L18 1 SEA FILE=REGISTRY ABB=ON PLU=ON 10043-35-3/RN  
 L19 14 SEA FILE=REGISTRY ABB=ON PLU=ON (L5 OR L6 OR L7 OR  
 L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR L15 OR  
 L16 OR L17 OR L18)  
 L22 1 SEA FILE=REGISTRY ABB=ON PLU=ON 64-19-7/RN  
 L23 15 SEA FILE=REGISTRY ABB=ON PLU=ON L19 OR L22  
 L41 489820 SEA FILE=HCAPLUS ABB=ON PLU=ON L23  
 L43 74504 SEA FILE=HCAPLUS ABB=ON PLU=ON L4  
 L45 58441 SEA FILE=HCAPLUS ABB=ON PLU=ON (CLEAN? OR CLEANER?  
 OR CLEANSER? OR LAUND? OR DISHWASH? OR DETERG? OR  
 ABSTERG?) (2A) (MIX? OR BLEND? OR COMPOSIT? OR COMPN# OR  
 COMPSN# OR FORMULAT? OR SOLUTION? OR SOLN# OR LIQ# OR  
 LIQUID#)  
 L50 112 SEA FILE=REGISTRY ABB=ON PLU=ON (ZN(L)O)/ELS(L)2/ELC.  
 SUB  
 L51 75175 SEA FILE=HCAPLUS ABB=ON PLU=ON L50  
 L62 124447 SEA FILE=HCAPLUS ABB=ON PLU=ON ZNO OR (ZINC OR  
 ZN) (W) (OXIDE? OR DIOXIDE? OR TRIOXIDE)  
 L63 128781 SEA FILE=HCAPLUS ABB=ON PLU=ON L43 OR L51 OR L62  
 L66 3681 SEA FILE=HCAPLUS ABB=ON PLU=ON L63 AND L41  
 L67 29 SEA FILE=HCAPLUS ABB=ON PLU=ON L66 AND L45  
 L68 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L67 AND DETERG?/SC

=> fil hcap  
 FILE 'HCAPLUS' ENTERED AT 17:11:50 ON 03 JUN 2005  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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=> => d l72 1-53 ibib abs hitstr hitind

L72 ANSWER 1 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2005:371365 HCAPLUS  
 DOCUMENT NUMBER: 142:413352  
 TITLE: Complete-cycle methods for protecting  
 glassware from surface corrosion in automatic  
 dishwashing appliances with  
 zinc-containing composition and soluble metal  
 salt containing rinse aid  
 INVENTOR(S): Song, Brian Xiaqing; Berger, Patricia Sara;  
 Schwartz, James Robert; Corkery, Robert  
 William  
 PATENT ASSIGNEE(S): The Procter & Gamble Company, USA  
 SOURCE: PCT Int. Appl., 42 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2005037978	A1	20050428	WO 2004-US34553	2004

1018

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,  
 CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,  
 ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,  
 KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
 MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL,  
 PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,  
 TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
 ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH,  
 CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,  
 MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI,  
 CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2003-511768P ; P

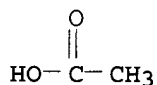
2003

1016

AB Complete-cycle methods for protecting glassware from corrosion in automatic **dishwashing** appliances use a through-the-wash **detergent composition**, especially **detergent compns.** comprising zinc-containing materials, in combination with a rinse aid composition, especially rinse aid compns. comprising at least one water-soluble metal salt. Such a domestic, institutional, industrial, and/or com. complete-cycle method of treating glassware surfaces in automatic **dishwashing** comprises the steps of: (a) providing a through-the-wash **detergent composition** comprising an effective amount of a particulate zinc-containing material; (b) providing a rinse aid composition comprising an effective amount of at least one metal salt; (c) contacting said glassware surface with said through-the-wash **detergent composition**; and (d) contacting said glassware surface with said rinse aid composition in the rinse cycle.

IT 557-34-6, Zinc acetate 557-41-5, Zinc formate 2847-05-4, Zinc malate 4468-02-4, Zinc gluconate 7646-85-7, Zinc chloride, uses 7733-02-0, Zinc sulfate 7779-88-6, Zinc nitrate  
 (methods for protecting glassware from surface corrosion in automatic **dishwashing** appliances with zinc-containing composition and soluble metal salt containing rinse aid)

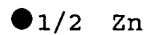
RN 557-34-6 HCAPLUS  
 CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

RN 557-41-5 HCAPLUS  
 CN Formic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)

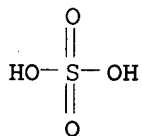
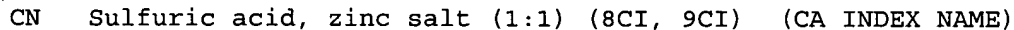
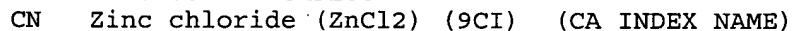




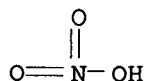
CN Butanedioic acid, hydroxy-, zinc salt (1:1) (9CI) (CA INDEX NAME)



CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4) - (9CI) (CA  
INDEX NAME)



CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

- IC ICM C11D003-02  
ICS C11D003-20; C11D003-10; C11D001-66
- CC 46-6 (Surface Active Agents and **Detergents**)
- ST glassware protection zinc contg **dishwashing** detergent  
rinse aid
- IT Phyllosilicate minerals  
(containing Zn<sup>2+</sup> ions; methods for protecting glassware from  
surface corrosion in automatic **dishwashing** appliances  
with zinc-containing composition and soluble metal salt containing rinse  
aid)
- IT Detergents  
(**dishwashing**; methods for protecting glassware from  
surface corrosion in automatic **dishwashing** appliances  
with zinc-containing composition and soluble metal salt containing rinse  
aid)
- IT Household furnishings  
(eating utensils, glassware; methods for protecting glassware  
from surface corrosion in automatic **dishwashing**  
appliances with zinc-containing composition and soluble metal salt  
containing  
rinse aid)
- IT Corrosion inhibitors  
Corrosion prevention  
(methods for protecting glassware from surface corrosion in  
automatic **dishwashing** appliances with zinc-containing  
composition and soluble metal salt containing rinse aid)
- IT Detergents  
(rinse aids; methods for protecting glassware from surface  
corrosion in automatic **dishwashing** appliances with  
zinc-containing composition and soluble metal salt containing rinse aid)
- IT 25751-21-7, Acrylic acid-methacrylic acid copolymer  
(dispersant, rinse aid; methods for protecting glassware from  
surface corrosion in automatic **dishwashing** appliances  
with zinc-containing composition and soluble metal salt containing rinse  
aid)
- IT 557-34-6, Zinc acetate 557-41-5, Zinc formate  
2847-05-4, Zinc malate 4468-02-4, Zinc gluconate  
5263-02-5, Zinc carbonate hydroxide (Zn<sub>5</sub>(CO<sub>3</sub>)<sub>2</sub>(OH)<sub>6</sub>) 6919-20-6  
7646-85-7, Zinc chloride, uses 7733-02-0, Zinc  
sulfate 7779-88-6, Zinc nitrate 12122-17-7,  
Hydrozincite 12199-19-8, Rosasite 55802-61-4, Zinc chloride  
hydroxide 55802-63-6, Zinc hydroxide sulfate 395074-43-8, Zinc  
hydroxide nitrate 850444-43-8  
(methods for protecting glassware from surface corrosion in  
automatic **dishwashing** appliances with zinc-containing  
composition and soluble metal salt containing rinse aid)
- IT 50-21-5, Lactic acid, uses 56-84-8, Aspartic acid, uses  
56-86-0, Glutamic acid, uses 64-18-6, Formic acid, uses  
64-19-7, Acetic acid, uses 65-85-0, Benzoic acid, uses

77-92-9, Citric acid, uses 87-69-4, Tartaric acid, uses  
 526-95-4, D-Gluconic acid 5329-14-6, Sulfamic acid 6915-15-7,  
 Malic acid 7647-01-0, Hydrochloric acid, uses 7664-93-9,  
 Sulfuric acid, uses 7697-37-2, Nitric acid, uses 7789-31-3,  
 Bromic acid 10043-35-3, Boric acid, uses  
 (rinse aid; methods for protecting glassware from surface  
 corrosion in automatic **dishwashing** appliances with  
 zinc-containing composition and soluble metal salt containing rinse aid)

IT 12172-81-5, Aurichalcite  
 (zinc copper carbonate hydroxide; methods for protecting  
 glassware from surface corrosion in automatic  
**dishwashing** appliances with zinc-containing composition and soluble  
 metal salt containing rinse aid)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L72 ANSWER 2 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:371362 HCAPLUS

DOCUMENT NUMBER: 142:394187

TITLE: Composition for protection of glassware in  
**dishwashers** containing zinc and  
 bismuth

INVENTOR(S): Hahn, Karlheinz Ulrich Gerhard; Werner, Karin

PATENT ASSIGNEE(S): Reckitt Benckiser N.V., Neth.; Reckitt  
 Benckiser Uk Limited

SOURCE: PCT Int. Appl., 44 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005037975	A1	20050428	WO 2004-GB4410	2004 1018

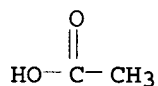
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 ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,  
 KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
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 PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,  
 TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
 ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH,  
 CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,  
 MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI,  
 CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: GB 2003-24295 A 2003  
 1017  
 GB 2004-4469 A 2004  
 0228

AB A composition comprises zinc and bismuth is for use in the protection

of glassware in an automatic **dishwashing** process from detrimental effects caused by exposure to aluminum. The ratio of zinc to bismuth in the composition is from 1:100 to 100:1 (based on mass of the metals), more preferably, from 1:10 to 10:1, more preferably from 1:5 to 5:1 and most preferably about 1:1, wherein they are in metallic form, an alloy, or as a salt or compound such as a nitrate, oxide, sulfate, phosphate, halide, carbonate or carboxylate salt.

IT 557-34-6, Zinc acetate  
(composition for protection of glassware in **dishwashers** containing zinc and bismuth)  
RN 557-34-6 HCAPLUS  
CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

IC ICM C11D003-00  
ICS C11D003-02  
CC 46-6 (Surface Active Agents and **Detergents**)  
ST zinc bismuth aluminum prevention glassware corrosion; automatic **dishwasher** zinc bismuth silicate prevention corrosion  
IT Corrosion inhibitors  
(composition for protection of glassware in **dishwashers** containing zinc and bismuth)  
IT Glass, uses  
(composition for protection of glassware in **dishwashers** containing zinc and bismuth)  
IT **Detergents**  
(**dishwashing**, tablet; composition for protection of glassware in **dishwashers** containing zinc and bismuth)  
IT Household furnishings  
(eating utensils, glasses; composition for protection of glassware in **dishwashers** containing zinc and bismuth)  
IT 557-34-6, Zinc acetate 813-93-4, Bismuth citrate 7429-90-5, Aluminum, uses 13870-28-5, Sodium disilicate  
(composition for protection of glassware in **dishwashers** containing zinc and bismuth)  
IT 1304-76-3, Bismuth oxide, uses 1314-13-2, Zinc oxide, uses  
(glass; composition for protection of glassware in **dishwashers** containing zinc and bismuth)  
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72. ANSWER 3 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:78197 HCAPLUS

DOCUMENT NUMBER: 142:137155

TITLE: **Dishwashing detergent**  
composition and methods for manufacturing and using

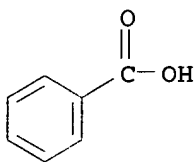
INVENTOR(S): Smith, Kim R.; Olson, Keith E.; Kestell, Howie; Bartelme, Michael J.; Lentsch, Steven

PATENT ASSIGNEE(S): E.; Man, Victor F.; Baum, Burton M.; Everson, Terence P.  
 SOURCE: USA  
 U.S. Pat. Appl. Publ., 27 pp., Cont.-in-part  
 of Ser. No. US 2003-612474, filed on 2 Jul  
 2003  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005020464	A1	20050127	US 2004-877049	2004 0625
US 2005003979	A1	20050106	US 2003-612474	2003 0702
PRIORITY APPLN. INFO.:			US 2003-612474	A2 2003 0702

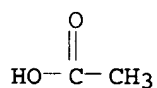
AB The warewashing **detergent composition** for use in automatic **dishwashing** machines includes a cleaning agent, an alkaline source, and a corrosion inhibitor. Such a warewashing **detergent composition** comprising: (a) a cleaning agent comprising a deterative amount of a surfactant; (b) an alkaline source in an amount effective to provide a use composition having a pH of at least about 8 and obtained by diluting the warewashing **detergent composition** with water; and (c) a corrosion inhibitor in an amount sufficient for reducing corrosion of glass, wherein the corrosion inhibitor comprising: (i) a source of aluminum ion; (ii) a source of zinc ion; and (iii) wherein the source of aluminum ion and the source of zinc ion are present in amts. sufficient to provide a use composition having a weight ratio of zinc ion to aluminum ion of at least about 2:1. The relative amts. of the source of zinc ion and the source of aluminum ion can be controlled to reduce visible filming when the warewashing **detergent composition** is used in the presence of hard water. Methods for using and manufacturing a warewashing **detergent composition** are provided.

IT 553-72-0, Zinc benzoate 557-34-6, Zinc acetate  
 557-41-5, Zinc formate 4468-02-4, Zinc gluconate  
 7646-85-7, Zinc chloride, uses 7699-45-8, Zinc  
 bromide 7733-02-0, Zinc sulfate 7779-88-6,  
 Zinc nitrate 16039-53-5, Zinc lactate  
 (dishwashing **detergent composition** and  
 methods for manufacturing and using)  
 RN 553-72-0 HCAPLUS  
 CN Benzoic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



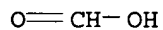
● 1/2 Zn

RN 557-34-6 HCAPLUS  
CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



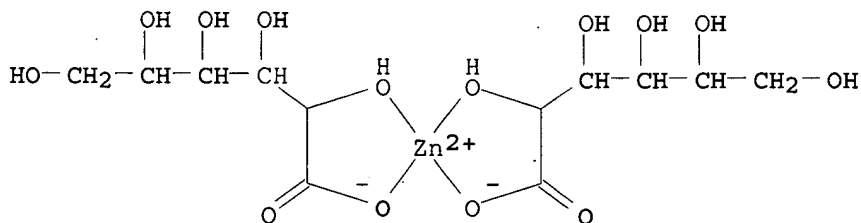
● 1/2 Zn

RN 557-41-5 HCAPLUS  
CN Formic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)

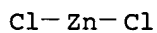


● 1/2 Zn

RN 4468-02-4 HCAPLUS  
CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)

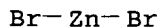


RN 7646-85-7 HCAPLUS  
CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)



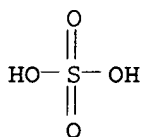
RN 7699-45-8 HCAPLUS

CN Zinc bromide (ZnBr<sub>2</sub>) (9CI) (CA INDEX NAME)



RN 7733-02-0 HCAPLUS

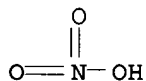
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

RN 7779-88-6 HCAPLUS

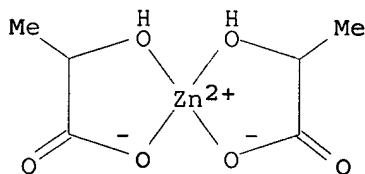
CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

RN 16039-53-5 HCAPLUS

CN Zinc, bis[2-(hydroxy-κO)propanoato-κO]-, (T-4)- (9CI)  
(CA INDEX NAME)



IC ICM C11D001-00

INCL 510220000

CC 46-6 (Surface Active Agents and Detergents)

ST aluminum zinc ion corrosion inhibitor **dishwashing**  
detergent; alk **dishwashing** detergent aluminum zinc contg

IT **Detergents**

(**dishwashing**, granular; **composition** and methods  
for manufacturing and using)

IT **Detergents**

(**dishwashing**, liquid; **composition** and  
methods for manufacturing and using)

IT 139-12-8, Aluminum acetate 144-55-8, Sodium bicarbonate, uses  
298-14-6, Potassium bicarbonate 497-19-8, Sodium carbonate, uses

533-96-0, Sodium sesquicarbonate 546-46-3, Zinc citrate  
 553-72-0, Zinc benzoate 557-34-6, Zinc acetate  
 557-41-5, Zinc formate 557-42-6, Zinc thiocyanate  
 584-08-7, Potassium carbonate 688-37-9, Aluminum oleate  
 815-78-1, Aluminum tartrate 1310-58-3, Potassium hydroxide, uses  
 1310-73-2, Sodium hydroxide, uses 1314-13-2, Zinc oxide, uses  
 1335-30-4, Aluminum silicate 1344-28-1, Aluminum oxide, uses  
 4468-02-4, Zinc gluconate 7360-53-4, Aluminum formate  
 7446-70-0, Aluminum chloride, uses 7646-85-7, Zinc  
 chloride, uses 7699-45-8, Zinc bromide 7727-15-3,  
 Aluminum bromide 7733-02-0, Zinc sulfate  
 7779-88-6, Zinc nitrate 7783-49-5, Zinc fluoride  
 7784-23-8, Aluminum iodide 7784-30-7, Aluminum phosphate  
 10043-01-3, Aluminum sulfate 10043-52-4, Calcium chloride, uses  
 10043-67-1, Aluminum potassium sulfate 10139-47-6, Zinc iodide  
 10361-95-2, Zinc chlorate 11121-16-7, Aluminum borate  
 11126-29-7, Zinc silicate 11126-81-1 11138-49-1, Sodium  
 aluminate 13473-90-0, Aluminum nitrate 14018-95-2, Zinc  
 dichromate 14519-07-4, Zinc bromate 15477-33-5, Aluminum  
 chlorate 16039-53-5, Zinc lactate 16283-36-6, Zinc  
 salicylate 16871-71-9, Zinc fluosilicate 18917-91-4, Aluminum  
 lactate 22992-10-5, Aluminum zinc sulfate 37224-32-1, Sodium  
 zincate 37275-76-6, Zinc aluminate 101508-09-2, Potassium  
 sesquicarbonate

(dishwashing detergent composition and  
 methods for manufacturing and using)

IT 9002-89-5, Polyvinyl alcohol  
 (water-soluble packaging material; **dishwashing  
 detergent composition** and methods for manufacturing and  
 using)

L72 ANSWER 4 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:15923 HCAPLUS

DOCUMENT NUMBER: 142:96381

TITLE: Warewashing **detergent  
 composition** containing a mixture of  
 aluminum and zinc ions for use in automatic  
**dishwashing** machines

INVENTOR(S): Lentsch, Steven E.; Bartelme, Michael J.; Man,  
 Victor F.; Baum, Burton M.; Everson, Terence  
 P.

PATENT ASSIGNEE(S): Ecolab Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 18 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2005003979	A1	20050106	US 2003-612474	2003 0702
US 2005020464	A1	20050127	US 2004-877049	2004 0625
WO 2005005589	A1	20050120	WO 2004-US20774	2004



0628

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,  
 CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,  
 ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,  
 KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
 MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL,  
 PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,  
 TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
 ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH,  
 CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,  
 MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI,  
 CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2003-612474

A2

2003

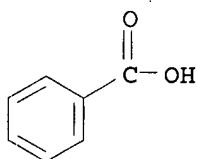
0702

AB The **composition** includes a **cleaning** agent, an alkaline source, and a corrosion inhibitor. The cleaning agent comprises a detergent amount of a surfactant. The alkaline source is provided in an amount effective to provide a use solution having a pH of at least about 8. The corrosion inhibitor includes a source of aluminum ion and a source of zinc ion. Methods for using and manufacturing a warewashing **detergent composition** are provided.

IT 553-72-0, Zinc benzoate 557-34-6, Zinc acetate 557-41-5, Zinc formate 4468-02-4, Zinc gluconate 7646-85-7, Zinc chloride, uses 7699-45-8, Zinc bromide 7733-02-0, Zinc sulfate 7779-88-6, Zinc nitrate 16039-53-5, Zinc lactate (corrosion inhibitor; warewashing **detergent composition** containing aluminum and zinc ions as corrosion inhibitor for use in automatic **dishwashing** machines)

RN 553-72-0 HCAPLUS

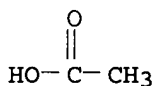
CN Benzoic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

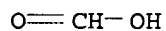
RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



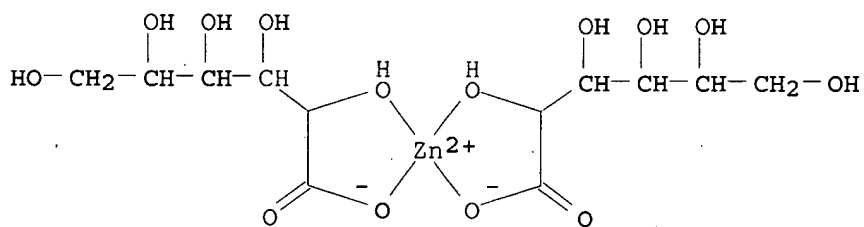
● 1/2 Zn

RN 557-41-5 HCAPLUS  
 CN Formic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)

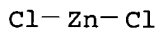


● 1/2 Zn

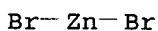
RN 4468-02-4 HCAPLUS  
 CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)



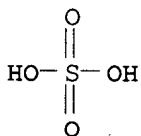
RN 7646-85-7 HCAPLUS  
 CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)



RN 7699-45-8 HCAPLUS  
 CN Zinc bromide (ZnBr2) (9CI) (CA INDEX NAME)

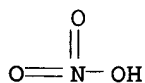


RN 7733-02-0 HCAPLUS  
 CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

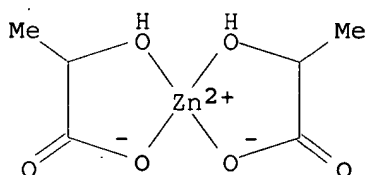
RN 7779-88-6 HCAPLUS  
 CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

RN 16039-53-5 HCAPLUS

CN Zinc, bis[2-(hydroxy-κO)propanoato-κO]-, (T-4)- (9CI)  
(CA INDEX NAME)



IC ICM C11D001-00

INCL 510220000

CC 46-6 (Surface Active Agents and Detergents)

ST automatic **dish washing** detergent corrosion  
inhibitor aluminum zinc ion

IT Surfactants

(anionic; warewashing **detergent composition**  
containing aluminum and zinc ions as corrosion inhibitor for use in  
automatic **dishwashing** machines)

IT Surfactants

(cationic; warewashing **detergent composition**  
containing aluminum and zinc ions as corrosion inhibitor for use in  
automatic **dishwashing** machines)

IT Detergents

(**dishwashing**; warewashing **detergent**  
**composition** containing aluminum and zinc ions as corrosion  
inhibitor for use in automatic **dishwashing** machines)

IT Surfactants

(nonionic; warewashing **detergent composition**  
containing aluminum and zinc ions as corrosion inhibitor for use in  
automatic **dishwashing** machines)

IT Corrosion inhibitors

(warewashing **detergent composition** containing  
aluminum and zinc ions as corrosion inhibitor for use in  
automatic **dishwashing** machines)

IT Alkali metal hydroxides

Bicarbonates

Carbonates, uses

(warewashing **detergent composition** containing  
aluminum and zinc ions as corrosion inhibitor for use in  
automatic **dishwashing** machines)

IT Surfactants

(zwitterionic; warewashing **detergent composition**  
containing aluminum and zinc ions as corrosion inhibitor for use in  
automatic **dishwashing** machines)

IT 139-12-8, Aluminum acetate 546-46-3, Zinc citrate

553-72-0, Zinc benzoate 557-34-6, Zinc acetate

557-41-5, Zinc formate 557-42-6, Zinc thiocyanate

688-37-9, Aluminum oleate 815-78-1, Aluminum tartrate  
 1302-42-7, Sodium aluminate 4468-02-4, Zinc gluconate  
 7360-53-4, Aluminum formate 7446-70-0, Aluminum chloride, uses  
 7646-85-7, Zinc chloride, uses 7699-45-8, Zinc  
 bromide 7727-15-3, Aluminum bromide 7733-02-0, Zinc  
 sulfate 7779-88-6, Zinc nitrate 7783-49-5, Zinc  
 fluoride 7784-23-8, Aluminum iodide 7784-30-7, Aluminum  
 phosphate 10043-01-3, Aluminum sulfate 10139-47-6, Zinc iodide  
 10361-95-2, Zinc chlorate 11121-16-7, Aluminum borate  
 11126-81-1 13473-90-0, Aluminum nitrate 14018-95-2, Zinc  
 dichromate 14519-07-4, Zinc bromate 15007-61-1, Aluminum  
 potassium sulfate 15477-33-5, Aluminum chlorate  
 16039-53-5, Zinc lactate 16283-36-6, Zinc salicylate  
 16871-71-9, Zinc fluorosilicate 18917-91-4, Aluminum lactate  
 22992-10-5, Aluminum zinc sulfate 37224-32-1, Sodium zincate  
 (corrosion inhibitor; warewashing **detergent**  
**composition** containing aluminum and zinc ions as corrosion  
 inhibitor for use in automatic **dishwashing** machines)  
 IT 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium  
 hydroxide, uses  
 (warewashing **detergent composition** containing  
 aluminum and zinc ions as corrosion inhibitor for use in  
 automatic **dishwashing** machines)  
 IT 144-55-8, Sodium bicarbonate, uses 298-14-6, Potassium  
 bicarbonate 497-19-8, Sodium carbonate, uses 533-96-0, Sodium  
 sesquicarbonate 584-08-7, Potassium carbonate 101508-09-2,  
 Potassium sesquicarbonate  
 (warewashing **detergent composition** containing  
 aluminum and zinc ions as corrosion inhibitor for use in  
 automatic **dishwashing** machines)

L72 ANSWER 5 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:893618 HCAPLUS  
 DOCUMENT NUMBER: 142:116524  
 TITLE: Detergent composition for kitchen  
 INVENTOR(S): Cha, Gyeong On; Lee, Jae Deok; Noh, Seung Ho  
 PATENT ASSIGNEE(S): Lg Chem Investment, Ltd., S. Korea  
 SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp.  
 given  
 CODEN: KRXXA7  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Korean  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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KR 2001063666	A	20010709	KR 1999-60867	1999 1223

PRIORITY APPLN. INFO.: KR 1999-60867

1999  
1223

AB A detergent composition for kitchen is provided, which has effects to absorb deodorant and sterilize and wash kitchen utensils altogether. The detergent composition for kitchen comprises: (i) glyoxal 0.01-5%; (ii) one or more minerals 0.01-5% selected from magnesium chloride, magnesium sulfate, sodium carbonate, sodium

bicarbonate, sodium sulfate, sodium chloride and zinc chloride; (iii) one or more organic acids 0.5-20% selected from citric acid, malic acid, succinic acid, tartaric acid, sorbic acid, ascorbic acid, lactic acid, and gluconic acid; (iv) one or more mint oil 0.005-5% selected from eucalyptol, thymol, eugenol, Me salicylate, menthol, menthone, and herb mint; (v) one or more pH regulating agent selected from sodium carbonate, potassium hydroxide, tri-ethanolamine, diethanolamine, and monoethanolamine to make pH reach 4-5; and (vi) a viscosity regulating agent selected from solvents such as ethanol, isopropanol, isobutanol, propylene glycol, or ethylene glycol.

IT 7646-85-7, Zinc chloride, uses  
(deodorant **detergent composition** for kitchen)  
RN 7646-85-7 HCAPLUS  
CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

IC ICM C11D003-60  
CC 46-6 (Surface Active Agents and **Detergents**)  
IT 50-21-5, Lactic acid, uses 77-92-9, Citric acid, uses 87-69-4, Tartaric acid, uses 89-80-5, Menthone 89-83-8, Thymol 97-53-0, Eugenol 102-71-6, Triethanolamine, uses 110-15-6, Succinic acid, uses 110-44-1, Sorbic acid 111-42-2, Diethanolamine, uses 119-36-8, Methyl salicylate\* 141-43-5, Ethanolamine, uses 144-55-8, Sodium bicarbonate, uses 470-82-6, Eucalyptol 497-19-8, Sodium carbonate, uses 526-95-4, D-Gluconic acid 1310-58-3, Potassium hydroxide, uses 1490-04-6, Menthol 6915-15-7, Malic acid 7487-88-9, Magnesium sulfate, uses 7646-85-7, Zinc chloride, uses 7647-14-5, Sodium chloride, uses 7757-82-6, Sodium sulfate, uses 7786-30-3, Magnesium chloride, uses 62624-30-0, Ascorbic acid (deodorant **detergent composition** for kitchen)

L72 ANSWER 6 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:857151 HCAPLUS  
DOCUMENT NUMBER: 141:333985  
TITLE: Antibacterial light duty liquid cleaning composition  
INVENTOR(S): Connors, Thomas; D'Ambrogio, Robert; Nascimbeni, Bruce  
PATENT ASSIGNEE(S): Colgate-Palmolive Company, USA  
SOURCE: U.S. Pat. Appl. Publ., 6 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2004204331	A1	20041014	US 2003-412831	2003 0414
WO 2004092319	A1	20041028	WO 2004-US11478	2004 0414

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,  
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,  
ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,  
KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL,  
PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,  
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW,  
AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY,  
CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,  
NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2003-412831

A

2003

0414

AB A light duty liquid cleaning composition comprises approx. by weight: (a) 5% to 55% of at least two surfactants selected from the group consisting of alpha olefin sulfonate, paraffin sulfonate, linear alkyl benzene sulfonates, paraffin sulfonates, alkyl sulfate, ethoxylated alkyl ether sulfate, alkyl polyglucoside, amine oxide, ethoxylated nonionics, ethoxylated/propoxylated nonionics, C12-C14 alkyl monoalkanol amides and zwitterionic surfactants and mixts. thereof; (b) 0.25% to 6% of a zinc inorg. salt; (c) 0.25% to 6% of a sodium salt of lauroyl ethylene diamine triacetate; and (d) the balance being water.

IT 7646-85-7, Zinc chloride, uses  
(antibacterial light duty liquid cleaning  
composition)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

IC ICM C11D017-00

INCL 510424000

CC 46-6 (Surface Active Agents and Detergents)

IT 7646-85-7, Zinc chloride, uses 206886-68-2, Sodium  
Lauroylethylenediaminetriacetate  
(antibacterial light duty liquid cleaning  
composition)

L72 ANSWER 7 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:841699 HCAPLUS

DOCUMENT NUMBER: 141:316307

TITLE: Dimensionally stable packed portions of  
detergents or cleaning  
compositions with improved compounding  
as well as dissolving and cleaning power

INVENTOR(S): Jekel, Maren; Dueffels, Arno; Reimann,  
Matthias; Fileccia, Salvatore; Barthel,  
Wolfgang

PATENT ASSIGNEE(S): Henkel Kgaa, Germany

SOURCE: Ger. Offen., 64 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10313456	A1	20041014	DE 2003-10313456	2003 0325

## PRIORITY APPLN. INFO.:

DE 2003-10313456

2003  
0325

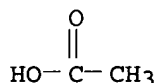
AB A procedure for manufacture the title product comprises (i) a molding processing (thermoforming or injection molding) of the first covering material forming a container with at least one chamber, and (ii) filling-in of  $\geq 1$  substance (mixture/s), whereby at least one is a dispersion of solid particles (d.  $> 1.1$  g/cm<sup>3</sup>, especially  $> 1.4$  g/cm<sup>3</sup>) consisting of (a) 10-65 weight%, especially 23-38 weight%, dispersing agents and (b) 30-90 weight% dispersed compds. The dispersing agent contains at least one nonionic polymer, especially (10-90 weight%, especially 50-70 weight% of (a)) polyethylene glycol and/or polypropylene glycol. At least one of the dispersing agents is a nonionic surfactant, especially an end-group-blocked poly(oxyalkylated) niotenside (1-60 weight%, especially 3-40 weight% referred to (a)). Furthermore, one of the dispersing agents has mol. weight 200-36,000, especially 300-5000; one has m.p.  $> 25^\circ$ , especially  $> 40^\circ$ ; and one has m.p.  $< 15^\circ$ , especially  $< 8^\circ$ . The dispersed compds. contain  $\geq 20$  weight%, especially 50-60 weight%, detergent builders and/or bleaching agents and/or bleaching catalysts and/or washing- and cleaning-active polymers and 0.04-18 weight%, especially 0.2-14 weight% glass corrosion protective agents, silver protective agents and/or enzymes as well as 0.1-50 weight%, especially 0.6-31 weight%, of a sulfone group-containing (co)polymer. The inventive detergent or cleaning agent is provided with a cavity for taking up a **cleaning composition** component from (c) 5-95 weight% surfactants, (d) 5-95 weight% meltable substances (m.p.  $> 30^\circ$ ) and water solubility  $< 20$  g/l at  $20^\circ$ , and (e) optionally further additives. It is covered with a watersol. or water dispersible packaging material (container and/or closure) having wall thickness  $< 200$   $\mu$ m, especially  $< 70$   $\mu$ m manufactured due to (i). Thus, a mixture was prepared from STTP 57.0; niotenside 12.5; sodium carbonate 6.0; bleaching agent (percarbonate) 7.0; bleaching activator (TAED) 0.5; polyacrylate, (acrylic acid-sulfonic acid copolymer) 10.0; sodium silicate 2.0; pigments 0.5; enzymes 3.0; glass corrosion protecting agent (zinc acetate) 1.0; silver protecting agent (manganese sulfate) 0.5; and dispersing agent (PEG 3000) 8.0 weight%. The inventive **dishwashing** detergent showed an improved cleaning power at lower content of washing- and cleaning-active substances compared with the com. products (without PEG 3000) as well as an improved silver corrosion protection.

IT 557-34-6, Zinc acetate

(glass corrosion-protecting agent; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

- IC ICM C11D017-00  
ICS C11D017-04
- CC 46-6 (Surface Active Agents and Detergents)  
Section cross-reference(s): 38
- ST **dishwashing** detergent dispersion polyethylene glycol  
dispersing agent; dimensionally stable water soluble water  
permeable detergent portion packaging; thermoforming injection  
molding water permeable detergent portion packaging; detergent  
nonionic polymer contg improved cleaning power; niotenside  
polyoxyalkylene **detergent compn**; glass  
corrosion protecting agent **dishwashing** detergent  
dispersion; silver protecting agent **dishwashing**  
detergent dispersion; manganese sulfate zinc acetate enzyme  
**dishwashing** detergent dispersion; sulfone group contg  
polymer **dishwashing** detergent dispersion
- IT Polyoxyalkylenes, uses  
(alkyl group-terminated, nonionic polymers, surfactants,  
niotenside; dimensionally stable packed portions of  
**detergents or cleaning compns.** with  
improved compounding as well as dissolving and cleaning power)
- IT Polyelectrolytes  
(amphoteric; dimensionally stable packed portions of  
**detergents or cleaning compns.** with  
improved compounding as well as dissolving and cleaning power)
- IT Polyelectrolytes  
(anionic; dimensionally stable packed portions of  
**detergents or cleaning compns.** with  
improved compounding as well as dissolving and cleaning power)
- IT Polyelectrolytes  
(cationic; dimensionally stable packed portions of  
**detergents or cleaning compns.** with  
improved compounding as well as dissolving and cleaning power)
- IT **Detergents**  
(**cleaning compns.**; dimensionally stable  
packed portions of **detergents or cleaning**  
**compns.** with improved compounding as well as dissolving  
and cleaning power)
- IT Bleaching agents  
Detergent builders  
Disperse systems  
Oxidation catalysts  
Pigments, nonbiological  
Surfactants  
(dimensionally stable packed portions of **detergents**  
or **cleaning compns.** with improved  
compounding as well as dissolving and cleaning power)
- IT Enzymes, uses  
(dimensionally stable packed portions of **detergents**  
or **cleaning compns.** with improved  
compounding as well as dissolving and cleaning power)



- IT Detergents  
(dishwashing; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Molding of plastics and rubbers  
(injection, watersol. or water dispersible packaging material; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Polyoxyalkylenes, uses  
(nonionic polymers; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Surfactants  
(nonionic; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Dispersing agents  
(polyethylene glycol; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Sulfonic acids, uses  
(polymers with acrylic acid; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Molding of plastics and rubbers  
(thermoforming, watersol. or water dispersible packaging material; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Containers  
(water soluble water permeable detergent portion packaging; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Packaging materials  
(watersol. or water dispersible; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT 10543-57-4, TAED  
(bleaching activator; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT 563-69-9, Carbonoperoxoic acid  
(bleaching agent; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT 497-19-8, Sodium carbonate, uses 1344-09-8, Sodium silicate  
(builder; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT 7758-29-4, Sodium tripolyphosphate  
(builder; dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT 79-10-7D, Acrylic acid, polymers with sulfonic acids  
(dimensionally stable packed portions of **detergents** or **cleaning compns.** with improved

- compounding as well as dissolving and cleaning power)
- IT 557-34-6, Zinc acetate  
(glass corrosion-protecting agent; dimensionally stable packed portions of **detergents or cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol 106392-12-5, Ethylene oxide-propylene oxide block copolymer  
(nonionic polymer component; dimensionally stable packed portions of **detergents or cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT 7785-87-7, Manganese sulfate  
(silver-protecting agent; dimensionally stable packed portions of **detergents or cleaning compns.** with improved compounding as well as dissolving and cleaning power)

L72 ANSWER 8 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:823994 HCAPLUS

DOCUMENT NUMBER: 141:316304

TITLE: Dimensionally stable packed **detergents or cleaning compositions** with improved compounding as well as dissolving and cleaning power

INVENTOR(S): Jekel, Maren; Dueffels, Arno; Reimann, Matthias; Barthel, Wolfgang; Fileccia, Salvatore

PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, USA

SOURCE: PCT Int. Appl., 118 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004085599	A1	20041007	WO 2004-EP2717	2004 0317

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

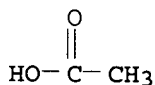
PRIORITY APPLN. INFO.: DE 2003-10312456 A

2003  
0325

AB A procedure for manufacture the title product comprises (i) a molding processing (thermoforming or injection molding) of the first

covering material forming a container with at least one chamber, and (ii) filling-in of  $\geq 1$  substance (mixture/s), whereby at least one is a dispersion of solid particles (d.  $>1.1$  g/cm<sup>3</sup>, especially  $>1.4$  g/cm<sup>3</sup>) consisting of (a) 10-65 weight%, especially 23-38 weight%, dispersing agents and (b) 30-90 weight% dispersed compds. The dispersing agent contains at least one nonionic polymer, especially (10-90 weight%, especially 50-70 weight% of (a)) polyethylene glycol and/or polypropylene glycol. At least one of the dispersing agents is a nonionic surfactant, especially an end-group-blocked poly(oxyalkylated) niotenside (1-60 weight%, especially 3-40 weight% referred to (a)). Furthermore, one of the dispersing agents has mol. weight 200-36,000, especially 300-5000; one has m.p.  $>25^\circ$ , especially  $>40^\circ$ ; and one has m.p.  $<15^\circ$ , especially  $<8^\circ$ . The dispersed compds. contain  $\geq 20$  weight%, especially 50-60 weight%, detergent builders and/or bleaching agents and/or bleaching catalysts and/or washing- and cleaning-active polymers and 0.04-18 weight%, especially 0.2-14 weight% glass corrosion protective agents, silver protective agents and/or enzymes as well as 0.1-50 weight%, especially 0.6-31 weight%, of a sulfone group-containing (co)polymer. The inventive detergent or cleaning agent is provided with a cavity for taking up a **cleaning composition** component from (c) 5-95 weight% surfactants, (d) 5-95 weight% meltable substances (m.p.  $>30^\circ$ ) and water solubility  $< 20$  g/l at  $20^\circ$ , and (e) optionally further additives. It is covered with a watersol. or water dispersible packaging material (container and/or closure) having wall thickness  $<200$   $\mu$ m, especially  $<70$   $\mu$ m manufactured due to (i). Thus, a mixture was prepared from STTP 57.0; niotenside 12.5; sodium carbonate 6.0; bleaching agent (percarbonate) 7.0; bleaching activator (TAED) 0.5; polyacrylate (acrylic acid-sulfonic acid copolymer) 10.0; sodium silicate 2.0; pigments 0.5; enzymes 3.0; glass corrosion protecting agent (zinc acetate) 1.0; silver protecting agent (manganese sulfate) 0.5; and dispersing agent (PEG 3000) 8.0 weight%. The inventive **dishwashing** detergent showed an improved cleaning power at lower content of washing- and cleaning-active substances compared with the com. products (without PEG 3000) as well as an improved silver corrosion protection.

- IT 557-34-6, Zinc acetate  
 (glass corrosion-protecting agent; dimensionally stable packed  
**detergents or cleaning compns.** with  
 improved compounding as well as dissolving and cleaning power)
- RN 557-34-6 HCAPLUS
- CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

- IC ICM C11D017-04  
 ICS C11D017-00; C11D011-00
- CC 46-6 (Surface Active Agents and Detergents)  
 Section cross-reference(s): 38
- ST **dishwashing** detergent dispersion polyethylene glycol  
 dispersing agent; dimensionally stable water soluble water  
 permeable detergent portion packaging; detergent nonionic polymer

- contg improved cleaning power; niotenside polyoxyalkylene **detergent compn**; glass corrosion protecting agent **dishwashing** detergent dispersion; silver protecting agent **dishwashing** detergent dispersion; manganese sulfate zinc acetate enzyme **dishwashing** detergent dispersion; sulfone group contg polymer **dishwashing** detergent dispersion
- IT Polyoxyalkylenes; uses  
(alkyl group-terminated, nonionic polymers, surfactants, niotenside; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Polyelectrolytes  
(amphoteric; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Polyelectrolytes  
(anionic; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Polyelectrolytes  
(cationic; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT **Detergents**  
(**cleaning compns.**; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Bleaching agents  
Detergent builders  
Disperse systems  
Oxidation catalysts  
Pigments, nonbiological  
Surfactants  
(dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Enzymes, uses  
(dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT **Detergents**  
(**dishwashing**; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Molding of plastics and rubbers  
(injection, watersol. or water dispersible packaging material; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Polyoxyalkylenes, uses  
(nonionic polymers; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Surfactants  
(nonionic; dimensionally stable packed **detergents** or **cleaning compns.** with improved compounding as well as dissolving and cleaning power)
- IT Dispersing agents

(polyethylene glycol; dimensionally stable packed  
**detergents or cleaning compns.** with  
improved compounding as well as dissolving and cleaning power)

IT Sulfonic acids, uses  
(polymers with acrylic acid; dimensionally stable packed  
**detergents or cleaning compns.** with  
improved compounding as well as dissolving and cleaning power)

IT Molding of plastics and rubbers  
(thermoforming, watersol. or water dispersible packaging  
material; dimensionally stable packed **detergents or  
cleaning compns.** with improved compounding as  
well as dissolving and cleaning power)

IT Containers  
(water soluble water permeable detergent portion packaging;  
dimensionally stable packed **detergents or  
cleaning compns.** with improved compounding as  
well as dissolving and cleaning power)

IT Packaging materials  
(watersol. or water dispersible; dimensionally stable packed  
**detergents or cleaning compns.** with  
improved compounding as well as dissolving and cleaning power)

IT 10543-57-4, TAED  
(bleaching activator; dimensionally stable packed  
**detergents or cleaning compns.** with  
improved compounding as well as dissolving and cleaning power)

IT 563-69-9, Carbonoperoxoic acid  
(bleaching agent; dimensionally stable packed  
**detergents or cleaning compns.** with  
improved compounding as well as dissolving and cleaning power)

IT 497-19-8, Sodium carbonate, uses 1344-09-8, Sodium silicate  
(builder; dimensionally stable packed **detergents or  
cleaning compns.** with improved compounding as  
well as dissolving and cleaning power)

IT 7758-29-4, Sodium tripolyphosphate  
(builder; dimensionally stable packed **detergents or  
cleaning compns.** with improved compounding as  
well as dissolving and cleaning power)

IT 79-10-7D, Acrylic acid, polymers with sulfonic acids  
(dimensionally stable packed **detergents or  
cleaning compns.** with improved compounding as  
well as dissolving and cleaning power)

IT 557-34-6, Zinc acetate  
(glass corrosion-protecting agent; dimensionally stable packed  
**detergents or cleaning compns.** with  
improved compounding as well as dissolving and cleaning power)

IT 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol  
106392-12-5, Ethylene oxide-propylene oxide block copolymer  
(nonionic polymer component; dimensionally stable packed  
**detergents or cleaning compns.** with  
improved compounding as well as dissolving and cleaning power)

IT 7785-87-7, Manganese sulfate  
(silver-protecting agent; dimensionally stable packed  
**detergents or cleaning compns.** with  
improved compounding as well as dissolving and cleaning power)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L72 ANSWER 9 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:823993 HCAPLUS

DOCUMENT NUMBER: 141:316303  
 TITLE: Dispersion of a detergent or a  
**cleaning composition** with  
 improved compounding as well as dissolving and  
 cleaning power having a density >1.040 g/cm<sup>3</sup>  
 INVENTOR(S): Lambotte, Alexander; Pegelow, Ulrich; Zippel,  
 Johannes  
 PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien,  
 Germany  
 SOURCE: PCT Int. Appl., 114 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004085597	A1	20041007	WO 2004-EP2721	2004 0317

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,  
 CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES,  
 FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
 KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,  
 MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT,  
 RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,  
 TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW,  
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY,  
 CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,  
 NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM,  
 GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

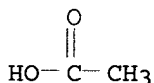
DE 10313457	A1	20041014	DE 2003-10313457	2003 0325
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PRIORITY APPLN. INFO.: DE 2003-10313457 A  
 2003  
 0325

AB The title product, a dispersion of d. >1.040 g/cm<sup>3</sup>, especially >1.4 g/cm<sup>3</sup> comprises (a) 10-65 weight%, especially 23-38 weight%, dispersing agents and (b) 30-90 weight% dispersed compds., which contain ≥20 weight%, especially ≥50 weight%, detergent builders and/or bleaching agents and/or bleaching catalysts and/or washing- and cleaning-active polymers and/or glass corrosion protective agents and/or silver protective agents referred to the total weight of (b). The dispersing agent contains at least one nonionic polymer, especially (10-90 weight%, especially 50-70 weight% of (a)) polyethylene glycol and/or polypropylene glycol. At least one of the dispersing agents is a nonionic surfactant, especially an end-group-blocked poly(oxyalkylated) niotenside (1-60 weight%, especially 3-40 weight% referred to (a)). Furthermore, one of the dispersing agents has mol. weight 200-36,000, especially 300-5000; one has m.p. >25°, especially >40°; and one has m.p. <15°, especially <8°. The dispersion contains <10 weight%, especially <1 weight%, water referred to its total weight. The inventive detergent or cleaning agent is provided with a cavity for taking up a **cleaning composition** component from (c) 5-95 weight% surfactants, (d) 5-95 weight% meltable substances (m.p.

>30°) and water solubility < 20 g/l at 20°, and (e) optionally further additives. It is coated with a watersol. or water dispersible packaging (wall thickness <200 µm, especially <70 µm) obtained by casting, thermoforming, or injection molding. Thus, a mixture was prepared from STTP 57.0; niotenside 12.5; sodium carbonate 6.0; bleaching agent (percarbonate) 7.0; bleaching activator (TAED) 0.5; polyacrylate (acrylic acid-sulfonic acid copolymer) 10.0; sodium silicate 2.0; pigments 0.5; enzymes 3.0; glass corrosion protecting agent (zinc acetate) 1.0; silver protecting agent (manganese sulfate) 0.5; and dispersing agent (PEG 3000) 8.0 weight%. The inventive **dishwashing** detergent showed an improved cleaning power at lower content of washing- and cleaning-active substances compared with the com. products (without PEG 3000) as well as an improved silver corrosion protection.

- IT 557-34-6, Zinc acetate  
 (glass corrosion-protecting agent; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- RN 557-34-6 HCAPLUS
- CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

- IC ICM C11D017-00
- CC 46-6 (Surface Active Agents and **Detergents**)
- ST detergent nonionic polymer contg improved cleaning power; **dishwashing** detergent dispersion polyethylene glycol dispersing agent; niotenside polyoxyalkylene **detergent compn**; glass corrosion protecting additive **dishwashing** detergent dispersion; silver protecting additive **dishwashing** detergent dispersion
- IT Polyoxyalkylenes, uses  
 (alkyl group-terminated, nonionic polymers, surfactants, niotenside; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT Polyelectrolytes  
 (amphoteric; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT Polyelectrolytes  
 (anionic; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT Polyelectrolytes  
 (cationic; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT **Detergents**  
 (**cleaning compns.**; dispersion of a

- detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT Detergents  
(dishwashing; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT Bleaching agents  
Detergent builders  
Disperse systems  
Oxidation catalysts  
Pigments, nonbiological  
Surfactants  
(dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT Enzymes, uses  
(dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT Polyoxyalkylenes, uses  
(nonionic polymers; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT Surfactants  
(nonionic; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT Dispersing agents  
(polyethylene glycol; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT Sulfonic acids, uses  
(polymers with acrylic acid; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT Packaging materials  
(watersol. or water dispersible; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT 10543-57-4, TAED  
(bleaching activator; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT 563-69-9, Carbonoperoxoic acid  
(bleaching agent; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT 497-19-8, Sodium carbonate, uses 1344-09-8, Sodium silicate  
(builder; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT 7758-29-4, Sodium tripolyphosphate  
(builder; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)
- IT 79-10-7D, Acrylic acid, polymers with sulfonic acids  
(dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)



IT 557-34-6, Zinc acetate  
(glass corrosion-protecting agent; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)

IT 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol 106392-12-5, Ethylene oxide-propylene oxide block copolymer (nonionic polymer component; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)

IT 7785-87-7, Manganese sulfate  
(silver-protecting agent; dispersion of a detergent or a **cleaning composition** with improved compounding as well as dissolving and cleaning power having a d. >1.040 g/cm<sup>3</sup>)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 10 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:823992 HCAPLUS

DOCUMENT NUMBER: 141:316302

TITLE: Detergents or cleaning agents with improved cleaning power containing glass corrosion protecting agents, silver protecting agents and/or enzymes

INVENTOR(S): Jekel, Maren; Pegelow, Ulrich; Kessler, Arnd

PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien, Germany

SOURCE: PCT Int. Appl., 114 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

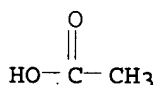
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004085596	A1	20041007	WO 2004-EP2720	2004 0317
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10313454	A1	20041021	DE 2003-10313454	2003 0325

PRIORITY APPLN. INFO.: DE 2003-10313454 A

2003  
0325

- AB The title product (d. >1.1 g/cm<sup>3</sup>, esp >1.4 g/cm<sup>3</sup>) comprises a dispersion of (a) 10-65 weight%, especially 23-38 weight%, dispersing agents and (b) 30-90 weight% dispersed compds., which contain 0.02-20 weight%, especially 0.2-14 weight% (referred to the total weight of (b)), of ≥1 washing and cleaning active additive from glass corrosion protecting agents, silver protecting agents and/or enzymes and ≥20 weight%, especially ≥50 weight%, detergent builders and/or bleaching agents and/or bleaching catalysts and/or washing- and cleaning-active polymers. The dispersing agent contains at least one nonionic polymer, especially polyethylene glycol and/or polypropylene glycol, whereby the total polyethylene glycol content of (a) amts. 10-90 weight%, especially 50-70 weight%. At least one of the dispersing agents is a nonionic surfactant, especially an end-group-blocked poly(oxyalkylated) niotenside, (1-60 weight%, especially 3-40 weight% referred to (a)). Furthermore, one of the dispersing agents has mol. weight 200-36,000, especially 300-5000; one has m.p. >25°, especially >40°; and one has m.p. <15°, especially <8°. The dispersion contains <10 weight%, especially <1 weight%, water referred to its total weight. The inventive detergent or cleaning agent is provided with a cavity for taking up a **cleaning composition** component from (c) 5-95 weight% surfactants, (d) 5-95 weight% meltable substances (m.p. >30°) and water solubility < 20 g/l at 20°, and (e) optionally further additives. It is covered with a watersol. or water dispersible packaging (wall thickness <200 μm, especially <70 μm) obtained by casting, thermoforming, or injection molding. Thus, a mixture was prepared from STTP 57.0; niotenside 12.5; sodium carbonate 6.0; bleaching agent (percarbonate) 7.0; bleaching activator (TAED) 0.5; polyacrylate (acrylic acid-sulfonic acid copolymer) 10.0; sodium silicate 2.0; pigments 0.5; enzymes 3.0; glass corrosion protecting agent (zinc acetate) 1.0; silver protecting agent (manganese sulfate) 0.5; and dispersing agent (PEG 3000) 8.0 weight%. The inventive **dishwashing** detergent showed an improved cleaning power at lower content of washing- and cleaning-active substances compared with the com. products (without PEG 3000) as well as an improved silver corrosion protection.
- IT 557-34-6, Zinc acetate  
(glass corrosion-protecting agent; detergents or cleaning agents with improved cleaning power containing glass corrosion protecting agents, silver protecting agents and/or enzymes)
- RN 557-34-6 HCAPLUS
- CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

- IC ICM C11D017-00  
ICS C11D003-37; C11D003-22; C11D003-386; C11D003-20; C11D003-16;  
C11D003-12
- CC 46-6 (Surface Active Agents and Detergents)
- ST detergent nonionic polymer contg improved cleaning power;  
**dishwashing** detergent dispersion polyethylene glycol  
dispersing agent; niotenside polyoxyalkylene **detergent**

compn; glass corrosion protective additive  
 dishwashing detergent; silver protective additive  
 dishwashing detergent; enzyme protective additive  
 dishwashing detergent; zinc acetate manganese sulfate in  
 dishwashing detergent dispersion

## IT Detergents

(cleaning compns.; detergents or  
 cleaning agents with improved cleaning power containing  
 glass corrosion protecting agents, silver protecting agents  
 and/or enzymes)

## IT Detergents

(dishwashing; detergents or cleaning agents with  
 improved cleaning power containing glass corrosion protecting  
 agents, silver protecting agents and/or enzymes)

## IT 557-34-6, Zinc acetate

(glass corrosion-protecting agent; detergents or cleaning  
 agents with improved cleaning power containing glass corrosion  
 protecting agents, silver protecting agents and/or enzymes)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L72 ANSWER 11 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:823990 HCAPLUS

DOCUMENT NUMBER: 141:316301

TITLE: Combined product of two detergents or cleaning  
 agents of different solubility with improved  
 compounding as well as dissolving and cleaning  
 power

INVENTOR(S): Jekel, Maren; Pegelow, Ulrich; Lambotte,  
 Alexander

PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien,  
 Germany

SOURCE: PCT Int. Appl., 114 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2004085593	A1	20041007	WO 2004-EP2722	
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2004  
0317

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,  
 CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES,  
 FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
 KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,  
 MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT,  
 RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,  
 TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW,  
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY,  
 CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,  
 NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM,  
 GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

DE 10313458	A1	20041118	DE 2003-10313458	
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2003

PRIORITY APPLN. INFO.:

DE 2003-10313458

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0325

2003

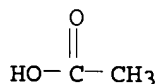
0325

AB The inventive **detergent or cleaning composition** comprises a first washing and **cleaning active composition** (dispersion) (A) consisting of (a) 10-90 weight% dispersing agents and (b) 10-90 weight% dispersed compds. (referred to the dispersion total weight), and a further (solid or **liquid**) washing and **cleaning active compn** . (B), which dissolves at 40° in water faster than A (>20 s, especially >120 s), whereby A dissolves <12 min, especially <7 min. The dispersing agent contains at least one nonionic polymer, especially ≥1 nonionic surfactant (≥30 %, especially ≥90% referred to to total **cleaning composition** weight). The dispersed compds. contain at least one detergent builder and/or bleaching agent and/or bleaching catalyst and/or washing- and cleaning-active polymer and/or glass corrosion protective agent and/or silver protective agent. They contain ≥30%, especially ≥90%, of all anionic and/or cationic and/or amphoteric polymers of the **cleaning composition**. Preferably, A forms a void for an at least partially, sep. uptake of B. The title product is covered with a watersol. or water dispersible packaging (wall thickness <200 μm, especially <70 μm) obtained by casting, thermoforming, or injection molding, so that it may directly placed in the **dishwasher** interior or a dosing device. Thus, a mixture was prepared from STTP 57.0; niotenside 12.5; sodium carbonate 6.0; bleaching agent (percarbonate) 7.0; bleaching activator (TAED) 0.5; polyacrylate (acrylic acid-sulfonic acid copolymer) 10.0; sodium silicate 2.0; pigments 0.5; enzymes 3.0; glass corrosion protecting agent (zinc acetate) 1.0; silver protecting agent (manganese sulfate) 0.5; and dispersing agent (PEG 3000) 8.0 weight%. The inventive **dishwashing** detergent showed an improved cleaning power at lower content of washing- and cleaning-active substances compared with the com. products (without PEG 3000) as well as an improved silver corrosion protection.

IT 557-34-6, Zinc acetate  
(glass corrosion-protecting agent; combined product of two detergents or cleaning agents of different solubility with improved compounding as well as dissolving and cleaning power)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

IC ICM C11D003-37

ICS C11D001-72

CC 46-6 (Surface Active Agents and Detergents)

ST combined **dishwashing compn** different water  
soly; detergent nonionic polymer contg improved cleaning power;

dishwashing detergent dispersion polyethylene glycol  
dispersing agent; niotenside contg cleaning  
compn improved silver protection

## IT Detergents

(cleaning compns.; combined product of two  
detergents or cleaning agents of different solubility with improved  
compounding as well as dissolving and cleaning power)

## IT Detergents

(dishwashing; combined product of two detergents or  
cleaning agents of different solubility with improved compounding as  
well as dissolving and cleaning power)

## IT 557-34-6, Zinc acetate

(glass corrosion-protecting agent; combined product of two  
detergents or cleaning agents of different solubility with improved  
compounding as well as dissolving and cleaning power)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L72 ANSWER 12 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:823989 HCAPLUS

DOCUMENT NUMBER: 141:316300

TITLE: Detergents or cleaning agents with improved  
compounding as well as dissolving and cleaning  
power containing anionic, cationic and/or  
amphoteric polymers

INVENTOR(S): Jekel, Maren; Pegelow, Ulrich; Lambotte,  
Alexander; Zipfel, Johannes

PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft Auf Aktien,  
Germany

SOURCE: PCT Int. Appl., 116 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004085592	A1	20041007	WO 2004-EP2716	2004 0317

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,  
CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES,  
FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,  
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT,  
RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,  
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW,  
AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY,  
CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,  
NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

DE 10313455 A1 20041014 DE 2003-10313455

2003  
0325

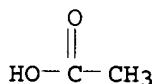
## PRIORITY APPLN. INFO.:

DE 2003-10313455 A

2003

0325

- AB A dispersion of the title product comprises (a) 10-65 weight%, especially 23-38 weight%, dispersing agents and (b) 30-90 weight% dispersed compds., which contain 0.1-50 weight%, especially 0.6-31 weight% (referred to the total weight of (b)), of an anionic, and/or cationic and/or amphoteric polymer. The dispersing agent contains at least one nonionic polymer, especially (10-90 weight%, especially 50-70 weight% of (a)) polyethylene glycol and/or polypropylene glycol. At least one of the dispersing agents is a nonionic surfactant, especially an end-group-blocked poly(oxyalkylated) niotenside (1-60 weight%, especially 3-40 weight% referred to (a)). Furthermore, one of the dispersing agents has mol. weight 200-36,000, especially 300-5000; one has m.p. >25°, especially >40°; and one has m.p. <15°, especially <8°. The dispersed compds. contain ≥20 weight%, especially ≥50 weight%, detergent builders and/or bleaching agents and/or bleaching catalysts and/or washing- and cleaning-active polymers and/or glass corrosion protective agents and/or silver protective agents. The dispersion contains <10 weight%, especially <1 weight%, water referred to its total weight. The inventive detergent or cleaning agent is provided with a cavity for taking up a **cleaning composition** component from (c) 5-95 weight% surfactants, (d) 5-95 weight% meltable substances (m.p. >30°) and water solubility < 20 g/l at 20°, and (e) optionally further additives. It is covered with a watersol. or water dispersible packaging (wall thickness <200 μm, especially <70 μm) obtained by casting, thermoforming, or injection molding. Thus, a mixture was prepared from STTP 57.0; niotenside 12.5; sodium carbonate 6.0; bleaching agent (percarbonate) 7.0; bleaching activator (TAED) 0.5; polyacrylate (acrylic acid-sulfonic acid copolymer) 10.0; sodium silicate 2.0; pigments 0.5; enzymes 3.0; glass corrosion protecting agent (zinc acetate) 1.0; silver protecting agent (manganese sulfate) 0.5; and dispersing agent (PEG 3000) 8.0 weight%. The inventive **dishwashing** detergent showed an improved cleaning power at lower content of washing- and cleaning-active substances compared with the com. products (without PEG 3000) as well as an improved silver corrosion protection.
- IT 557-34-6, Zinc acetate  
(glass corrosion-protecting agent; detergents or cleaning agents with improved compounding as well as dissolving and cleaning power containing anionic, cationic and/or amphoteric polymers)
- RN 557-34-6 HCAPLUS
- CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

- IC ICM C11D003-37
- CC 46-6 (Surface Active Agents and Detergents)
- ST detergent nonionic polymer contg improved cleaning power; **dishwashing** detergent dispersion polyethylene glycol dispersing agent; niotenside polyoxyalkylene **detergent**

compn  
IT Detergents  
(cleaning compns.; detergents or  
cleaning agents with improved compounding as well as  
dissolving and cleaning power containing anionic, cationic and/or  
amphoteric polymers)  
IT Detergents  
(dishwashing; detergents or cleaning agents with  
improved compounding as well as dissolving and cleaning power  
containing anionic, cationic and/or amphoteric polymers)  
IT 557-34-6, Zinc acetate  
(glass corrosion-protecting agent; detergents or cleaning  
agents with improved compounding as well as dissolving and  
cleaning power containing anionic, cationic and/or amphoteric  
polymers)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L72 ANSWER 13 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:823251 HCAPLUS

DOCUMENT NUMBER: 141:316297

TITLE: Deodorant compositions and  
liquid detergents containing  
them

INVENTOR(S): Konishi, Yoshihiro; Muraoka, Kaoru; Yoshida,  
Ryuji

PATENT ASSIGNEE(S): Kao Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004277554	A2	20041007	JP 2003-70572	

2003

0314

PRIORITY APPLN. INFO.: JP 2003-70572

2003

0314

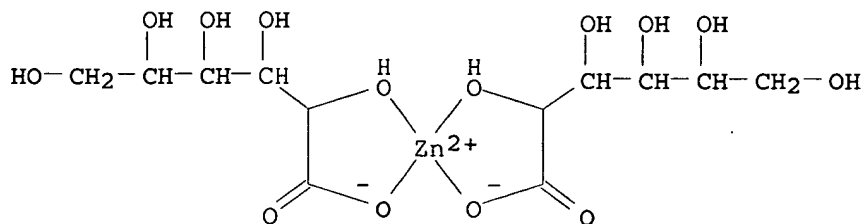
AB The compns., useful for dishwashing  
detergents, contain 0.005-1% rosemary oils, lemongrass oils,  
spearmint oils, peppermint oils, sage oils, and/or ginger oils,  
0.001-0.5% Zn, and water. Thus, a sponge soaked with an aqueous solution  
containing ZnCl<sub>2</sub> 0.06, rosemary oil 0.2, and lauryl glucoside 1.5%  
showed good deodorant properties.

IT 4468-02-4, Zinc gluconate 7646-85-7, Zinc  
chloride, uses 7733-02-0, Zinc sulfate  
(deodorant compns. containing plant oils and Zn for liquid  
dishwashing detergents)

RN 4468-02-4 HCAPLUS

CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA

INDEX NAME)



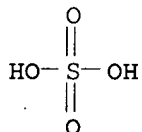
RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

RN 7733-02-0 HCAPLUS

CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

- IC ICM C11D003-50
- ICS A61L002-18; C11B009-00; C11D003-04; C11D017-08
- CC 46-6 (Surface Active Agents and **Detergents**)
- ST deodorant rosemary oil **liq detergent** sponge;
- dishwashing** detergent deodorant zinc lemongrass oil
- IT Polyoxyalkylenes, uses  
(alkyl group-terminated, sulfate Na salt, surfactant; deodorant  
compns. containing plant oils and Zn for **liquid**  
**dishwashing detergents**)
- IT Deodorants  
Surfactants  
(deodorant compns. containing plant oils and Zn for **liquid**  
**dishwashing detergents**)
- IT Polyoxyalkylenes, uses  
(deodorant compns. containing plant oils and Zn for **liquid**  
**dishwashing detergents**)
- IT **Detergents**  
(**dishwashing, liquid**; deodorant  
compns. containing plant oils and Zn for **liquid**  
**dishwashing detergents**)
- IT Essential oils  
(ginger; deodorant compns. containing plant oils and Zn for  
**liquid dishwashing detergents**)
- IT Essential oils  
(lemongrass; deodorant compns. containing plant oils and Zn for  
**liquid dishwashing detergents**)
- IT Essential oils  
(peppermint; deodorant compns. containing plant oils and Zn for



liquid dishwashing detergents)  
 IT Essential oils  
 (rosemary; deodorant compns. containing plant oils and Zn for  
 liquid dishwashing detergents)  
 IT Essential oils  
 (sage, Salvia officinalis; deodorant compns. containing plant oils  
 and Zn for liquid dishwashing  
 detergents)  
 IT Essential oils  
 (spearmint; deodorant compns. containing plant oils and Zn for  
 liquid dishwashing detergents)  
 IT 4468-02-4, Zinc gluconate 7646-85-7, Zinc  
 chloride, uses 7733-02-0, Zinc sulfate  
 (deodorant compns. containing plant oils and Zn for liquid  
 dishwashing detergents)  
 IT 1643-20-5, N-Lauryl-N,N-dimethylamine oxide 25322-68-3D, alkyl  
 ether sulfate Na salt 27836-64-2, Lauryl glucoside  
 (surfactant; deodorant compns. containing plant oils and Zn for  
 liquid dishwashing detergents)

L72 ANSWER 14 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:589642 HCAPLUS  
 DOCUMENT NUMBER: 141:142251  
 TITLE: Preparation of automatic dishwashing  
 compositions utilizing in-situ  
 prepared water-soluble zinc salts  
 INVENTOR(S): Song, Brian Xiaoqing  
 PATENT ASSIGNEE(S): The Procter & Gamble Company, USA  
 SOURCE: PCT Int. Appl., 12 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004061070	A1	20040722	WO 2003-US40559	2003 1219

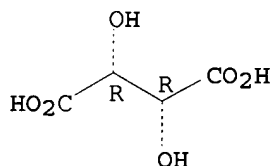
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,  
 CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,  
 ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,  
 KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
 MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,  
 RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,  
 TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW,  
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY,  
 CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,  
 NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA,  
 GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2004176269	A1	20040909	US 2003-738492	2003 1217
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PRIORITY APPLN. INFO.: US 2002-437077P P  
 2002  
 1230

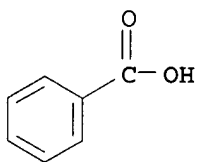
- AB A process for preparing in-situ water-soluble zinc salts as a base or additive for an automatic dishwashing composition is composed of: (a) dispersing ZnO in water, (b) combining an acid, such as acetic acid and aspartic acid, with the ZnO/water mixture, (c) mixing the ZnO/water mixture and the acid until the ZnO is at least partially dissolved, (d) maintaining the ZnO/water/acid mixture within an acidic pH (<5), and (e) combining the ZnO/water/acid mixture with at least one rinse aid ingredient, such as a surfactant and a thickener, to form a rinse aid composition
- IT 551-64-4P, Tartaric acid zinc salt (1:1) 553-72-0P, Zinc benzoate 557-34-6P, Zinc acetate 557-41-5P, Zinc formate 1332-07-6P, Zinc borate 2452-01-9P, Zinc laurate 2847-05-4P, Zinc malate 4468-02-4P, Zinc gluconate 7646-85-7P, Zinc chloride, uses 7699-45-8P, Zinc bromide 7733-02-0P, Zinc sulfate 7779-88-6P, Zinc nitrate 10380-06-0P, Zinc perborate 13770-90-6P, Zinc sulfamate 16039-53-5P, Zinc lactate (in-situ prepared water-soluble zinc salts for automatic dishwashing compns.)
- RN 551-64-4 HCAPLUS
- CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)-, zinc salt (1:1) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



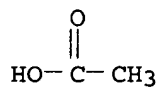
● Zn

- RN 553-72-0 HCAPLUS
- CN Benzoic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



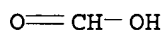
● 1/2 Zn

- RN 557-34-6 HCAPLUS
- CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

RN 557-41-5 HCAPLUS  
CN Formic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

RN 1332-07-6 HCAPLUS  
CN Boric acid, zinc salt (9CI) (CA INDEX NAME)

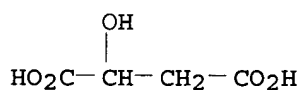
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 2452-01-9 HCAPLUS  
CN Dodecanoic acid, zinc salt (9CI) (CA INDEX NAME)



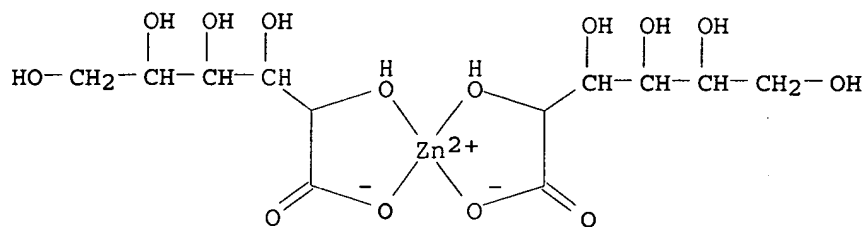
● 1/2 Zn

RN 2847-05-4 HCAPLUS  
CN Butanedioic acid, hydroxy-, zinc salt (1:1) (9CI) (CA INDEX NAME)



● Zn

RN 4468-02-4 HCAPLUS  
CN Zinc, bis(D-gluconato- $\kappa$ O1, $\kappa$ O2)-, (T-4)- (9CI) (CA INDEX NAME)



RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

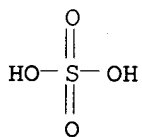
RN 7699-45-8 HCAPLUS

CN Zinc bromide (ZnBr<sub>2</sub>) (9CI) (CA INDEX NAME)

Br-Zn-Br

RN 7733-02-0 HCAPLUS

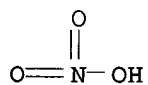
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

RN 7779-88-6 HCAPLUS

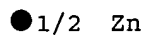
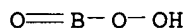
CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

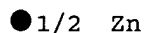
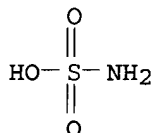
RN 10380-06-0 HCAPLUS

CN Perboric acid (HBO(O<sub>2</sub>)), zinc salt (9CI) (CA INDEX NAME)



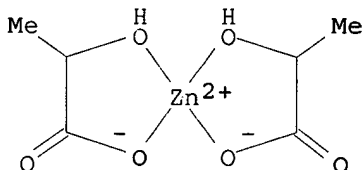
RN 13770-90-6 HCAPLUS

CN Sulfamic acid, zinc salt (2:1) (8CI, 9CI) (CA INDEX NAME)



RN 16039-53-5 HCAPLUS

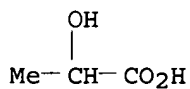
CN Zinc, bis[2-(hydroxy-κO)propanoato-κO]-, (T-4)- (9CI)  
(CA INDEX NAME)



IT 50-21-5, Lactic acid, reactions 56-84-8,  
Aspartic acid, reactions 56-86-0, Glutamic acid,  
reactions 64-18-6, Formic acid, reactions  
64-19-7, Acetic acid, reactions 65-85-0, Benzoic  
acid, reactions 87-69-4, Tartaric acid, reactions  
526-95-4, Glyconic acid 1314-13-2, Zinc  
oxide, reactions 5329-14-6, Sulfamic acid  
6915-15-7, Malic acid 7647-01-0, Hydrochloric  
acid, reactions 7664-93-9, Sulfuric acid, reactions  
7697-37-2, Nitric acid, reactions 7789-31-3,  
Bromic acid 10043-35-3, Boric acid, reactions  
(in-situ prepared water-soluble zinc salts for automatic  
dishwashing compns.)

RN 50-21-5 HCAPLUS

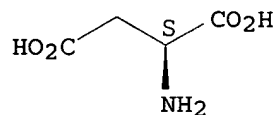
CN Propanoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)



RN 56-84-8 HCAPLUS

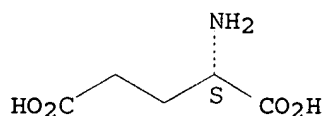
CN L-Aspartic acid (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

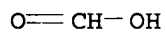


RN 56-86-0 HCAPLUS  
CN L-Glutamic acid (9CI) (CA INDEX NAME)

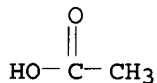
Absolute stereochemistry.



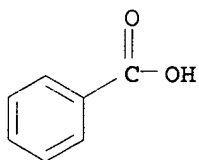
RN 64-18-6 HCAPLUS  
CN Formic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 64-19-7 HCAPLUS  
CN Acetic acid (7CI, 8CI, 9CI) (CA INDEX NAME)

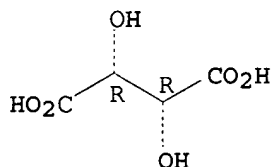


RN 65-85-0 HCAPLUS  
CN Benzoic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



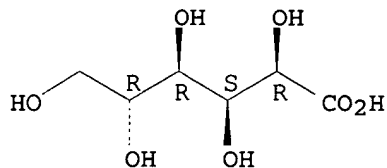
RN 87-69-4 HCAPLUS  
CN Butanedioic acid, 2,3-dihydroxy- (2R,3R) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

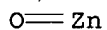


RN 526-95-4 HCAPLUS  
 CN D-Gluconic acid (9CI) (CA INDEX NAME)

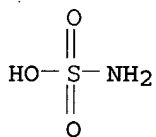
Absolute stereochemistry.



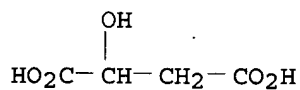
RN 1314-13-2 HCAPLUS  
 CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)



RN 5329-14-6 HCAPLUS  
 CN Sulfamic acid (8CI, 9CI) (CA INDEX NAME)



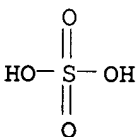
RN 6915-15-7 HCAPLUS  
 CN Butanedioic acid, hydroxy- (9CI) (CA INDEX NAME)



RN 7647-01-0 HCAPLUS  
 CN Hydrochloric acid (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

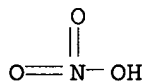


RN 7664-93-9 HCAPLUS  
 CN Sulfuric acid (8CI, 9CI) (CA INDEX NAME)



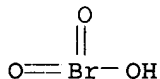
RN 7697-37-2 HCAPLUS

CN Nitric acid (8CI, 9CI) (CA INDEX NAME)



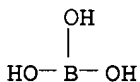
RN 7789-31-3 HCAPLUS

CN Bromic acid (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 10043-35-3 HCAPLUS

CN Boric acid (H3BO3) (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C11D003-02

ICS C11D003-20; C11D003-00; C01G009-00

CC 46-6 (Surface Active Agents and Detergents)

ST **dishwasher** detergent soluble zinc salt rinse aid prepn

IT Detergents

(**dishwashing**; in-situ prepared **water-soluble** zinc salts for automatic **dishwashing compns**.)

IT Detergents

(rinse aids; in-situ prepared **water-soluble** zinc salts for automatic **dishwashing compns**.)

IT 551-64-4P, Tartaric acid zinc salt (1:1) 553-72-0P

, Zinc benzoate 557-34-6P, Zinc acetate

557-41-5P, Zinc formate 1332-07-6P, Zinc borate

2452-01-9P, Zinc laurate 2847-05-4P, Zinc malate

4468-02-4P, Zinc gluconate 7646-85-7P, Zinc

chloride, uses 7699-45-8P, Zinc bromide

7733-02-0P, Zinc sulfate 7779-88-6P, Zinc

nitrate 10380-06-0P, Zinc perborate 13770-90-6P

, Zinc sulfamate 16039-53-5P, Zinc lactate

(in-situ prepared **water-soluble** zinc salts for automatic **dishwashing compns**.)

IT 50-21-5, Lactic acid, reactions 56-84-8,

Aspartic acid, reactions 56-86-0, Glutamic acid,

reactions 64-18-6, Formic acid, reactions

64-19-7, Acetic acid, reactions 65-85-0, Benzoic

acid, reactions 87-69-4, Tartaric acid, reactions

526-95-4, Glyconic acid 1314-13-2, Zinc

oxide, reactions 5329-14-6, Sulfamic acid

6915-15-7, Malic acid 7647-01-0, Hydrochloric

acid, reactions 7664-93-9, Sulfuric acid, reactions

7697-37-2, Nitric acid, reactions 7789-31-3,

Bromic acid 10043-35-3, Boric acid, reactions

(in-situ prepared **water-soluble** zinc salts for automatic



## dishwashing compns.)

L72 ANSWER 15 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:507835 HCAPLUS  
 DOCUMENT NUMBER: 141:39967  
 TITLE: Antibacterial **liquid detergents** with good low-temperature storage stability  
 INVENTOR(S): Konishi, Yoshihiro; Yomogida, Yoshihiro; Nishizawa, Nobuhiro  
 PATENT ASSIGNEE(S): Kao Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

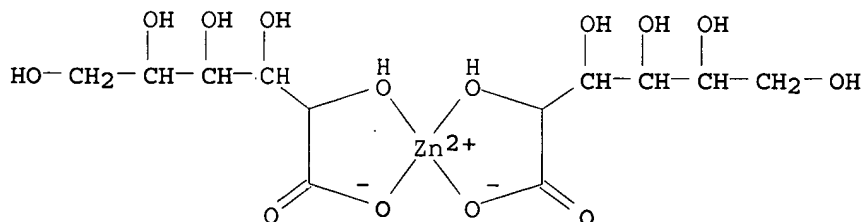
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004175846	A2	20040624	JP 2002-340761	2002 1125
PRIORITY APPLN. INFO.: JP 2002-340761				2002 1125

AB The detergents contain (a) 5-50% nonionic surfactants, (b) 0.001-0.1% Zn, and (c) compds. chosen from Na benzoate, p-hydroxybenzoate esters, and phenoxyethanol. Thus, a composition containing (a) 30% polyoxyethylene alkyl ether sulfate Na salt prepared from 50:50 1-decene and 1-dodecene as alc. components, (b) 0.15% Zn sulfate, (c) 0.5% phenoxyethanol, and other additives was used for **dishwashing**, resulting in good antibacterial property in a short time.

IT **4468-02-4**, Zinc gluconate **7646-85-7**, Zinc chloride, uses **7733-02-0**, Zinc sulfate (antibacterial **liquid detergents** with good low-temperature storage stability)

RN 4468-02-4 HCAPLUS

CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA INDEX NAME)



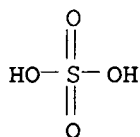
RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

RN 7733-02-0 HCAPLUS

CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

- IC ICM C11D010-02  
ICS A01N025-02; A01N025-30; A01N031-14; A01N037-10; A01N037-40;  
A01N059-16; C11D001-29; C11D003-04; C11D003-20; C11D003-48;  
C11D009-50; C11D017-08
- CC 46-6 (Surface Active Agents and **Detergents**)  
Section cross-reference(s): 5
- ST **antibacterial liq detergent**  
**dishwashing** storage stability; sodium benzoate  
hydroxybenzoate ester zinc antibacterial detergent; nonionic  
surfactant polyoxyethylene alkyl sulfate sodium detergent; zinc  
sulfate phenoxyethanol **dishwashing** detergent  
antibacterial
- IT Antibacterial agents  
(antibacterial **liquid detergents** with good  
low-temperature storage stability)
- IT **Detergents**  
(**dishwashing, liquid**; antibacterial  
**liquid detergents** with good low-temperature storage  
stability)
- IT Surfactants  
(nonionic; antibacterial **liquid detergents**  
with good low-temperature storage stability)
- IT 94-26-8, Butyl p-hydroxybenzoate 99-76-3, Methyl  
p-hydroxybenzoate 120-47-8, Ethyl p-hydroxybenzoate 122-99-6,  
Phenoxyethanol 532-32-1, Sodium benzoate 557-08-4, Zinc  
undecylenate 4468-02-4, Zinc gluconate 7646-85-7  
, Zinc chloride, uses 7733-02-0, Zinc sulfate  
(antibacterial **liquid detergents** with good  
low-temperature storage stability)
- IT 75-21-8DP, Ethylene oxide, reaction products with hydroformylated  
1-decene and 1-dodecene, sulfonated, sodium salt 112-41-4DP,  
1-Dodecene, hydroformylated, reaction products with ethylene oxide  
and hydroformylated 1-decene, sulfonated, sodium salt  
872-05-9DP, 1-Decene, hydroformylated, reaction products with  
ethylene oxide and hydroformylated 1-dodecene, sulfonated, sodium  
salt  
(antibacterial **liquid detergents** with good  
low-temperature storage stability)

L72 ANSWER 16 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:351737 HCAPLUS

DOCUMENT NUMBER: 140:359369  
 TITLE: Antibacterial liquid  
 detergent composition  
 containing zinc  
 INVENTOR(S): Konishi, Yoshihiro; Nishida, Kohei  
 PATENT ASSIGNEE(S): Kao Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004131626	A2	20040430	JP 2002-298530	2002 1011

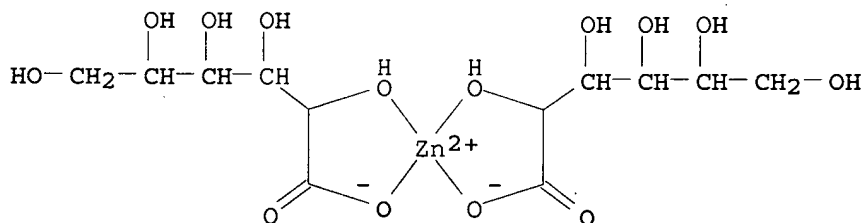
PRIORITY APPLN. INFO.: JP 2002-298530  
 2002  
 1011

AB The **composition**, useful for **dishwashing**, contains  
 (a) 5-50% of an anionic surfactant, (b) 0.01-5% of a polybasic  
 carboxylic acid, i.e., C1-8 compound with 2-6 CO<sub>2</sub>H, (c) 0.001-0.5%  
 Zn, (d) 0.02-2% of an alkaline earth metal, and water at d/b (mol)  
 ≥1 and d/c (mol) ≥1. Thus, a composition containing 15% Na  
 polyoxyethylene alkyl ether sulfate, 0.5% citric acid, 0.15%  
 ZnSO<sub>4</sub>, and 4.5% MgCl<sub>2</sub>·6H<sub>2</sub>O showed good antibacterial effect  
 associated with prevention of precipitation in storage.

IT 4468-02-4, Zinc gluconate 7646-85-7, Zinc  
 chloride, uses 7733-02-0, Zinc sulfate  
 (**liquid detergent composition** containing  
 zinc with good antibactericidal effect and storage stability)

RN 4468-02-4 HCAPLUS

CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA  
 INDEX NAME)



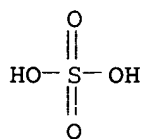
RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

RN 7733-02-0 HCAPLUS

CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

- IC ICM C11D003-20  
ICS A01N059-06; A01N059-16; C11D001-75; C11D003-04; C11D003-48;  
C11D017-08
- CC 46-6 (Surface Active Agents and Detergents)
- ST **liq detergent** zinc antibacterial effect;  
anionic surfactant zinc sulfate **liq detergent**;  
polybasic carboxylic acid zinc sulfate detergent; alk earth metal  
zinc **liq detergent**; storage stability  
**liq detergent** zinc sulfate
- IT Polyoxyalkylenes, uses  
(alkyl ether, sodium sulfate, anionic surfactant; **liq**  
**detergent composition** containing zinc with good  
antibactericidal effect and storage stability)
- IT Surfactants  
(anionic; **liquid detergent composition**  
containing zinc with good antibactericidal effect and storage  
stability)
- IT **Detergents**  
(dishwashing; **liquid detergent**  
**composition** containing zinc with good antibactericidal effect  
and storage stability)
- IT Alkaline earth metals  
(in **liquid detergent composition** containing  
zinc with good antibactericidal effect and storage stability)
- IT Antibacterial agents  
(**liquid detergent composition** containing  
zinc with good antibactericidal effect and storage stability)
- IT **Detergents**  
(**liquid; liquid detergent**  
**composition** containing zinc with good antibactericidal effect  
and storage stability)
- IT 25322-68-3D, Polyethylene glycol, alkyl ether, sodium sulfate  
(anionic surfactant; **liquid detergent**  
**composition** containing zinc with good antibactericidal effect  
and storage stability)
- IT 77-92-9, Citric acid, uses 7786-30-3, Magnesium chloride, uses  
(in **liquid detergent composition** containing  
zinc with good antibactericidal effect and storage stability)
- IT 1643-20-5, N-Lauryl-N,N-dimethylamine oxide 7732-18-5, Water,  
uses 61792-31-2, Laurylamidopropyldimethylamine oxide  
(in **liquid detergent composition** containing  
zinc with good antibactericidal effect and storage stability)
- IT 4468-02-4, Zinc gluconate 7646-85-7, Zinc  
chloride, uses 7733-02-0, Zinc sulfate  
(**liquid detergent composition** containing  
zinc with good antibactericidal effect and storage stability)

L72 ANSWER 17 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:931461 HCAPLUS  
 DOCUMENT NUMBER: 139:383096  
 TITLE: Light-duty liquid disinfectant detergent  
 containing lactic acid and zinc chloride  
 INVENTOR(S): Arvanitidou, Evangelia  
 PATENT ASSIGNEE(S): Colgate-Palmolive Company, USA  
 SOURCE: PCT Int. Appl., 13 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003097779	A1	20031127	WO 2003-US14689	2003 0512

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,  
 CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI,  
 GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,  
 KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,  
 MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC,  
 SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ,  
 VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,  
 DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL,  
 PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,  
 GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-144084 A  
 2002  
 0513

AB A title detergent comprises a paraffin sulfonate, an  
 $\alpha$ -olefin sulfonate, an acid, a sultaine surfactant, an  
 inorg. Zn salt, and H<sub>2</sub>O. A title detergent having pH 3.5  
 contained paraffin sulfonate 11.01,  $\alpha$ -olefin sulfonate  
 22.03, cocoamidopropyl hydroxysultaine alkali metal salt 6.96,  
 lactic acid 2.00, ZnCl<sub>2</sub> 1.00 and H<sub>2</sub>O 56.00.

IT 7646-85-7, Zinc chloride, uses  
 (light-duty liquid detergent containing lactic  
 acid and)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

IC ICM C11D003-02

ICS C11D003-20; C11D001-94

CC 46-6 (Surface Active Agents and Detergents)

IT 7646-85-7, Zinc chloride, uses  
 (light-duty liquid detergent containing lactic  
 acid and)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L72 ANSWER 18 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2003:707829 HCAPLUS  
DOCUMENT NUMBER: 139:216208  
TITLE: Antibacterial light duty liquid detergent with  
high foaming and good grease cutting  
properties  
INVENTOR(S): Connors, Thomas; D'Ambrogio, Robert;  
Nascimbeni, Bruce  
PATENT ASSIGNEE(S): Colgate-Palmolive Company, USA  
SOURCE: U.S., 6 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 6617296	B1	20030909	US 2003-378878	2003 0305
PRIORITY APPLN. INFO.: US 2003-378878				2003 0305

AB A light duty liquid comprises of at least two different surfactants,  
lauroyl ethylenediaminetriacetate (i.e, sodium  
lauroylethylenediaminetriacetate), a zinc inorg. salt (i.e., zinc  
chloride), and water.  
IT 7646-85-7, Zinc chloride, uses  
(antibacterial light duty liquid detergent)  
RN 7646-85-7 HCAPLUS  
CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl- Zn- Cl

IC ICM C11D017-00  
INCL 510221000; 510235000; 510424000; 510426000; 510433000; 510470000;  
510490000; 510499000; 510508000  
CC 46-6 (Surface Active Agents and Detergents)  
IT 7646-85-7, Zinc chloride, uses  
(antibacterial light duty liquid detergent)  
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L72 ANSWER 19 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2003:532736 HCAPLUS  
DOCUMENT NUMBER: 139:102763  
TITLE: Composition, process and uses of salt coated  
granules  
INVENTOR(S): Bach, Poul; Simonsen, Ole  
PATENT ASSIGNEE(S): Novozymes A/S, Den.  
SOURCE: PCT Int. Appl., 33 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent

LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003055967	A1	20030710	WO 2002-DK885	2002 1220

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1456336	A1	20040915	EP 2002-787464	2002 1220
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

US 2005085406	A1	20050421	US 2003-499497	2002 1220
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PRIORITY APPLN. INFO.:	DK 2001-1930	A	2001 1221
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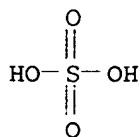
WO 2002-DK885	W	2002 1220
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AB A process for preparing coated granules comprises the steps of: (a) providing a core unit comprising an active component (b) contacting the core unit with a liquid dispersion comprising a solvent, a dissolved salt and solid dispersed particles wherein the solid particles constitute at least 10% weight/weight of the total dry matter of the dispersion (c) evaporating the solvent of the liquid dispersion to leave salt and solid particles coated onto the core unit.

IT 7733-02-0, Zinc sulfate  
 (composition, process and uses of salt coated granules)

RN 7733-02-0 HCAPLUS

CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

IC ICM C11D003-386  
ICS C11D011-00; C11D017-00; C12N009-98  
CC 46-5 (Surface Active Agents and Detergents)  
Section cross-reference(s): 17  
IT **Detergents**  
(dishwashing, granular; **composition**, process and  
uses of salt coated granules)  
IT **Detergents**  
(enzyme-containing; **composition**, process and uses of salt  
coated granules)  
IT **Detergents**  
(powdered; **composition**, process and uses of salt coated  
granules)  
IT 57-50-1, Sucrose, uses 68-04-2, Sodium citrate 142-72-3,  
Magnesium acetate 1330-43-4, Sodium borate 6132-04-3, Sodium  
citrate dihydrate 7446-20-0, Zincsulfate heptahydrate  
7487-88-9, Magnesium sulfate, uses 7558-79-4 7558-80-7, Sodium  
dihydrogen phosphate 7601-54-9, Sodium phosphate 7646-93-7,  
Potassium hydrogen sulfate 7722-76-1, Ammonium dihydrogen  
phosphate 7733-02-0, Zinc sulfate 7757-82-6, Sodium  
sulphate, uses 7758-11-4 7758-29-4, Sodium tripolyphosphate  
7758-98-7, Copper sulfate, uses 7758-99-8, Copper sulfate  
pentahydrate 7778-77-0, Potassium dihydrogen phosphate  
7778-80-5, Potassium sulfate, uses 7783-20-2, Ammonium sulfate,  
uses 10034-99-8, Magnesium sulfate heptahydrate 10377-60-3,  
Magnesium nitrate 11130-11-3 13446-18-9, Magnesium nitrate  
hexahydrate 14807-96-6, Talc, uses 16674-78-5, Magnesium  
acetate tetrahydrate 556816-16-1  
(composition, process and uses of salt coated granules)  
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L72 ANSWER 20 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2003:28885 HCAPLUS  
DOCUMENT NUMBER: 138:41026  
TITLE: Nano-class composite detergent and its  
preparing process  
INVENTOR(S): Liang, Guangchuan; Liu, Qiwen; Li, Wei; Jia,  
Di; Liang, Jinsheng  
PATENT ASSIGNEE(S): Peop. Rep. China  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu,  
10 pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:



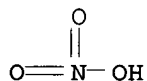
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 1325950	A	20011212	CN 2001-120229	2001 0710
PRIORITY APPLN. INFO.:			CN 2001-120229	2001 0710

AB The composite detergent is composed of surfactant 10-40, natural inorg. non-metal mineral (clay-type natural mineral containing Al or Mg and having nanosized lamellar or channel structure) 1-40, nanometer particle antibacterial agent (such as CeO<sub>2</sub>, thiazole, ZnO) 0.1-25, alkali active agent (such as Na<sub>2</sub>CO<sub>3</sub>, Na<sub>2</sub>SiO<sub>3</sub>) 5-40, Ca-Mg ion chelating agent (such as 4A zeolite, SKS-6) 5-60, bleaching agent 1-5, dirt suspending agent 0-20, anti-clustering agent (such as Na xylenesulfonate) 1-5, fluorescent brightening agent 0.1-1, filler (such as Na<sub>2</sub>SO<sub>4</sub>) 0-30 and perfume 0-0.1 weight%. The preparing process comprises treating natural inorg. non-metal mineral with nanometer composite technique, mixing it with other components, activating at 20-150°, and then drying, spray drying or agglomerating to obtain the composite detergent.

IT 7779-88-6, Zinc nitrate  
(nano-class composite detergent composition)

RN 7779-88-6 HCAPLUS

CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

IC ICM C11D003-00

CC 46-5 (Surface Active Agents and Detergents)  
Section cross-reference(s): 57

IT 151-21-3, Sodium dodecyl sulfate, uses 288-47-1, Thiazole  
1300-72-7, Sodium xylenesulfonate 1312-81-8, Lanthanum oxide  
1314-13-2, Zinc oxide, uses 6834-92-0, Sodium metasilicate  
7779-88-6, Zinc nitrate 7783-90-6, Silver chloride, uses  
9002-92-0, Polyethylene glycol dodecyl ether 9014-92-0,  
Polyethylene glycol dodecylphenyl ether 11129-18-3, Cerium oxide  
13463-67-7, Titania, uses 20526-58-3 25155-30-0, Sodium  
dodecyl benzenesulfonate  
(nano-class composite detergent composition)

L72 ANSWER 21 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:960648 HCAPLUS

DOCUMENT NUMBER: 138:26144

TITLE: Antibacterial light duty liquid cleaning  
composition comprising zinc salt

INVENTOR(S): Connors, Thomas; D'Ambrogio, Robert;

PATENT ASSIGNEE(S): Nascimbeni, Bruce  
SOURCE: Colgate-Palmolive Company, USA  
U.S., 5 pp., Cont.-in-part of U.S. 6,492,313.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6495500	B1	20021217	US 2002-195879	2002 0715
US 6492313	B1	20021210	US 2002-192935	2002 0711
PRIORITY APPLN. INFO.:			US 2002-192935	A2 2002 0711

AB A light duty liquid cleaning composition comprises a C8-C18 ethoxylated alkyl ether sulfate surfactant, a magnesium salt of a C8-C18 linear alkyl benzene sulfonate, a sodium salt of a C8-C18 linear alkyl benzene sulfonate, an amine oxide, a polyalkylglucoside, a zinc inorg. salt, and water. Thus, a liquid cleaning composition was prepared by mixing ammonium alkyl ether sulfate 1.3EO 11.49, magnesium linear alkyl sulfonate 9.02, sodium linear alkyl sulfonate 3.00, alkyl polyglycoside 10.00, C12-C14 amidopropylamine oxide 5.42, sodium xylene sulfonate 1.50, sodium lauroyl ethylene diamine triacetate 1.50, zinc chloride 1.00 part, other additives and water.

IT 7646-85-7, Zinc chloride, uses  
(preparation of antibacterial light duty liquid  
cleaning composition containing zinc salt)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

IC ICM C11D017-00

INCL 510221000; 510235000; 510424000; 510425000; 510433000; 510470000;  
510490000; 510499000; 510508000

CC 46-6 (Surface Active Agents and Detergents)

IT 7646-85-7, Zinc chloride, uses  
(preparation of antibacterial light duty liquid  
cleaning composition containing zinc salt)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L72 ANSWER 22 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:942777 HCAPLUS

DOCUMENT NUMBER: 138:5894

TITLE: Antibacterial light duty liquid detergent  
containing zinc salt

INVENTOR(S): Connors, Thomas; D'Ambrogio, Robert;

PATENT ASSIGNEE(S): Nascimbeni, Bruce  
SOURCE: Colgate-Palmolive Company, USA  
U.S., 5 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6492313	B1	20021210	US 2002-192935	2002 0711
US 6495500	B1	20021217	US 2002-195879	2002 0715
PRIORITY APPLN. INFO.:			US 2002-192935	A2 2002 0711

AB A light duty, liquid cleaning composition comprises a paraffin sulfonate, an alpha olefin sulfonate, an amine oxide, lauryol ethylenediaminetriacetate, a zinc inorg. salt, and water. The composition has good grease-cutting and excellent disinfecting properties on hard surfaces.

IT 7646-85-7, Zinc chloride, uses  
(light-duty antibacterial **cleaning composition**  
containing paraffin sulfonate and zinc salt)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

IC ICM C11D017-00

INCL 510221000; 510235000; 510425000; 510424000; 510433000; 510470000;  
510490000; 510499000; 510508000

CC 46-6 (Surface Active Agents and Detergents)

IT 7646-85-7, Zinc chloride, uses  
(light-duty antibacterial **cleaning composition**  
containing paraffin sulfonate and zinc salt)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L72 ANSWER 23 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:688554 HCAPLUS

DOCUMENT NUMBER: 137:203064

TITLE: **Liquid automatic dishwashing  
composition** containing zinc gluconate  
with improved glassware protection

INVENTOR(S): Keyes, George B.; Seaman, Charles E.; Kasson,  
Jon K.

PATENT ASSIGNEE(S): Johnsondiversey, Inc., USA

SOURCE: U.S., 9 pp., Cont.-in-part of U.S. 6,083,894.

CODEN: USXXAM

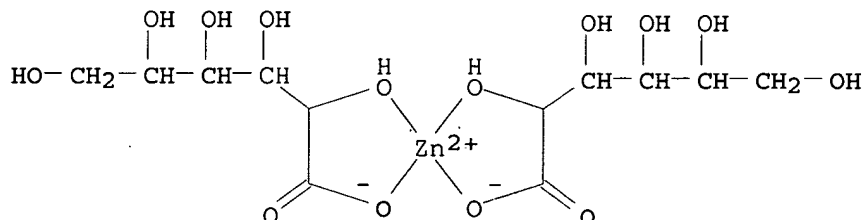
DOCUMENT TYPE: Patent

LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6448210	B1	20020910	US 2000-504360	2000 0215
US 6083894	A	20000704	US 1999-272133	1999 0319
WO 2000056851	A1	20000928	WO 2000-US6129	2000 0309
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
GB 2364324	A1	20020123	GB 2001-24033	2000 0309
GB 2364324	B2	20040121		
ES 2192976	A1	20031016	ES 2001-50071	2000 0309
ES 2192976	B2	20040801		
PRIORITY APPLN. INFO.:			US 1999-272133	A2 1999 0319
			US 2000-504360	A 2000 0215
			WO 2000-US6129	W 2000 0309

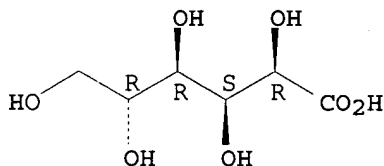
AB Title liquid automatic dishwashing  
 detergent composition comprises (a) a chelate, (b) a base selected from the group consisting of sodium hydroxide, potassium hydroxide, or a mixture thereof, and (c) at least 3% of zinc gluconate; wherein the zinc gluconate is formed in an in situ process step. An example dishwashing detergent was formulated by admixing gluconic acid 2.58, zinc oxide powder 0.54, trisodium nitrilotriacetate (NTA, 40%) 68.50, Dequest 2010 1.50, KOH, (flake, 90%) 5.00, NaOH (anhydrous) 4.00 wt% in deionized water 17.88 wt%. The detergent demonstrated improved glassware protection when employed in conjunction with cleaning materials having high concns. of alkaline materials.

IT 4468-02-4, Zinc gluconate  
 (formulation of liquid automatic dishwashing  
 composition for cleaning alkali materials)  
 RN 4468-02-4 HCAPLUS  
 CN Zinc, bis(D-gluconato- $\kappa$ O1, $\kappa$ O2)-, (T-4)- (9CI) (CA  
 INDEX NAME)



IT 526-95-4, Gluconic acid 1314-13-2, Zinc  
 oxide, reactions  
 (source of zinc gluconate; formulation of liquid  
 automatic dishwashing composition containing zinc  
 gluconate)  
 RN 526-95-4 HCAPLUS  
 CN D-Gluconic acid (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 1314-13-2 HCAPLUS  
 CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)

O=Zn

IC ICM C11D007-06  
 ICS C11D007-10  
 INCL 510221000  
 CC 46-6 (Surface Active Agents and Detergents)  
 ST liq automatic dishwashing detergent  
 glassware zinc gluconate  
 IT Detergents  
 (dishwashing, liquid; formulation  
 of liquid automatic dishwashing compn  
 . for cleaning alkali materials)  
 IT Chelating agents  
 (formulation of liquid automatic dishwashing  
 composition for cleaning alkali materials)  
 IT Glass, miscellaneous  
 (glassware; formulation of liquid automatic  
 dishwashing composition for cleaning  
 alkali materials)

IT 5064-31-3, Trisodium nitrilotriacetate  
(chelating agent; formulation of **liquid automatic dishwashing composition** for cleaning alkali materials)

IT 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses 2809-21-4, Dequest 2010 **4468-02-4**, Zinc gluconate  
(formulation of **liquid automatic dishwashing composition** for cleaning alkali materials)

IT 526-95-4, Gluconic acid 527-07-1, Sodium gluconate **1314-13-2, Zinc oxide**, reactions  
16788-42-4, Zinc sulfate hydrate  
(source of zinc gluconate; formulation of **liquid automatic dishwashing composition** containing zinc gluconate)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L72 ANSWER 24 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2002:475242 HCAPLUS  
DOCUMENT NUMBER: 137:34834  
TITLE: Method and apparatus for recycling of polluted **cleaning solutions**  
INVENTOR(S): Okamoto, Yoshihiro; Nakamura, Kazuya; Arai, Hitoshi; Sawairi, Kiyoshi  
PATENT ASSIGNEE(S): Sawyer Corporation K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002177964	A2	20020625	JP 2000-404050	2000 1207

PRIORITY APPLN. INFO.: JP 2000-404050  
2000  
1207

AB The **solns.** recovered after **cleaning** metal masks, mesh screens, etc., are recycled by the following steps: adding adsorbents of carbonate salts, chlorides, fermentation liquid, oxides, and/or surfactants to the recovered solns.; stirring and leaving the mixts.; sedimentation-separating suspended matter; recovering and storing the resulting supernatants; and using the stored **solns.** for **cleaning**. The apparatus has a recycling function for the polluted **solns.** and a **cleaning** function for materials to be cleaned. Thus, C-containing cleaning wastewater was stirred with CaCO<sub>3</sub> and sedimentation-separated for 30 min to give a transparent supernatant.

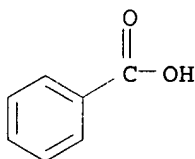
IT 1314-13-2, **Zinc oxide**, uses  
(adsorbent; method and apparatus for recycling of polluted **cleaning solns.** by sedimentation with adsorbents)

RN 1314-13-2 HCAPLUS

CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)

O=Zn

IT 65-85-0D, Benzoic acid, esters  
(adsorbents; method and apparatus for recycling of polluted  
**cleaning solns.** by sedimentation with  
adsorbents)  
RN 65-85-0 HCAPLUS  
CN Benzoic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C02F001-52  
ICS B01D021-01; C02F001-28; C11D007-12; C11D007-20; C11D007-26;  
C11D007-40; C11D007-50; C11D007-60  
CC 46-6 (Surface Active Agents and **Detergents**)  
Section cross-reference(s): 60  
ST **cleaning soln** recycling adsorbent mixing  
sedimentation supernatant; wastewater **cleaning** recycling  
adsorbent **mixing** sedimentation; calcium carbonate  
suspended matter sedimentation **cleaning soln**  
IT Sake  
(adsorbent; method and apparatus for recycling of polluted  
**cleaning solns.** by sedimentation with  
adsorbents)  
IT Kaolin, uses  
(adsorbent; method and apparatus for recycling of polluted  
**cleaning solns.** by sedimentation with  
adsorbents)  
IT Lecithins  
Monoglycerides  
(adsorbents; method and apparatus for recycling of polluted  
**cleaning solns.** by sedimentation with  
adsorbents)  
IT Wastewater treatment  
(adsorption; method and apparatus for recycling of polluted  
**cleaning solns.** by sedimentation with  
adsorbents)  
IT Fermentation  
(liquid from, adsorbents; method and apparatus for recycling of  
polluted **cleaning solns.** by sedimentation  
with adsorbents)  
IT Cleaning solvents  
Recycling  
(method and apparatus for recycling of polluted **cleaning**  
**solns.** by sedimentation with adsorbents)  
IT Wastewater treatment  
(settling; method and apparatus for recycling of polluted  
**cleaning solns.** by sedimentation with  
adsorbents)

- IT 99-96-7, uses 471-34-1, Calcium carbonate, uses 1305-78-8, Calcium oxide, uses 1309-37-1, Iron(III) oxide, uses 1309-48-4, Magnesium oxide, uses 1314-13-2, Zinc oxide, uses 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 7786-30-3, Magnesium chloride, uses (adsorbent; method and apparatus for recycling of polluted cleaning solns. by sedimentation with adsorbents)
- IT 65-85-0D, Benzoic acid, esters (adsorbents; method and apparatus for recycling of polluted cleaning solns. by sedimentation with adsorbents)

L72 ANSWER 25 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:578597 HCAPLUS

DOCUMENT NUMBER: 135:124156

TITLE: Bactericide combinations in detergents

INVENTOR(S): Elsmore, Richard; Houghton, Mark Phillip

PATENT ASSIGNEE(S): Robert McBride Ltd., UK

SOURCE: Brit. UK Pat. Appl., 53 pp.

CODEN: BAXXDU

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

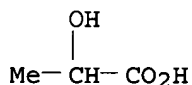
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 2354771	A1	20010404	GB 1999-23253	1999 1001
PRIORITY APPLN. INFO.:				GB 1999-23253 1999 1001

AB The detergent comprises a bactericide in combination with an anionic, cationic, nonionic or amphoteric surfactant which has a C12-18 alkyl group as the longest chain attached to the hydrophilic moiety. Creduret 50 (hydrogenated ethoxylated castor oil) 50, citric acid 12, formalin 10, sodium alkyl benzene sulfonate (C12-20) alkyl 1, perfume white line 0.5, detergent enzyme savingase 0.2, and bactericide Pr 4-hydroxybenzoate 1.0 parts formed a detergent, showing reduction activity after contact 2.

IT 50-21-5, uses 64-18-6, Formic acid, uses 64-18-6D, Formic acid, reaction products 64-19-7D, Acetic acid, derivs., uses 1314-13-2, Zinc oxide (ZnO), uses 5329-14-6, Sulfamic acid 6915-15-7 7647-01-0, Hydrochloric acid, uses 7664-93-9, Sulfuric acid, uses 7697-37-2, Nitric acid, uses 10043-35-3, Boric acid (H3BO3), uses (bactericide combinations in detergents)

RN 50-21-5 HCAPLUS

CN Propanoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)

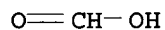




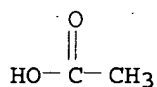
RN 64-18-6 HCAPLUS  
CN Formic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



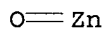
RN 64-18-6 HCAPLUS  
CN Formic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



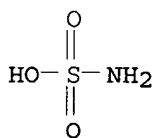
RN 64-19-7 HCAPLUS  
CN Acetic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



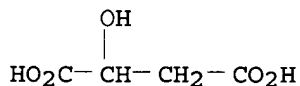
RN 1314-13-2 HCAPLUS  
CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)



RN 5329-14-6 HCAPLUS  
CN Sulfamic acid (8CI, 9CI) (CA INDEX NAME)



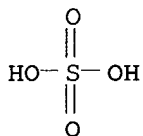
RN 6915-15-7 HCAPLUS  
CN Butanedioic acid, hydroxy- (9CI) (CA INDEX NAME)



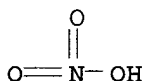
RN 7647-01-0 HCAPLUS  
CN Hydrochloric acid (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



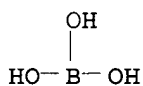
RN 7664-93-9 HCAPLUS  
CN Sulfuric acid (8CI, 9CI) (CA INDEX NAME)



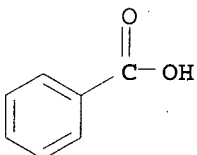
RN 7697-37-2 HCAPLUS  
CN Nitric acid (8CI, 9CI) (CA INDEX NAME)



RN 10043-35-3 HCAPLUS  
CN Boric acid (H<sub>3</sub>BO<sub>3</sub>) (6CI, 8CI, 9CI) (CA INDEX NAME)



IT 65-85-0, Benzoic acid, uses  
(r; bactericide combinations in detergents)  
RN 65-85-0 HCAPLUS  
CN Benzoic acid (7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C11D003-48  
CC 46-6 (Surface Active Agents and Detergents)  
IT **Detergents**  
(liquid; bactericide combinations in detergents)  
IT 50-00-0, Formaldehyde, uses 50-00-0D, Formaldehyde, reaction products, uses 50-14-6 50-21-5, uses 50-65-7  
50-99-7, D-Glucose, uses 51-03-6 51-28-5, uses 52-51-7  
52-68-6 54-21-7 54-64-8 55-38-9 55-56-1 55-86-7  
56-35-9 56-36-0 56-37-1 56-38-2 56-95-1 57-09-0  
57-10-3, Hexadecanoic acid, uses 57-15-8 57-24-9,  
Strychnidin-10-one 57-55-6D, Propylene glycol, reaction products with formaldehyde 58-36-6 58-89-9 59-50-7 59-87-0  
60-12-8, Benzeneethanol 60-51-5 61-73-4 62-38-4 62-56-6,  
Thiourea, uses 62-73-7 63-25-2 64-18-6, Formic acid, uses 64-18-6D, Formic acid, reaction products  
64-19-7D, Acetic acid, derivs., uses 64-69-7 67-20-9  
67-63-0D, 2-Propanol, reaction products with boron trifluoride and 5-ethylidenebicyclo[2.2.1]hept-2-ene, uses 67-66-3, uses  
67-68-5, uses 67-97-0 69-72-7, uses 70-55-3 71-23-8,

1-Propanol, uses 71-41-0, 1-Pentanol, uses 72-43-5 72-56-0  
 74-83-9, uses 75-12-7D, Formamide, reaction products with  
 formaldehyde, uses 75-21-8, Oxirane, uses 75-31-0,  
 2-Propanamine, uses 75-91-2 76-06-2 76-22-2 76-39-1  
 76-87-9 77-42-9 77-48-5 77-49-6 77-78-1D, Dimethyl  
 sulfate, quaternized with 9-octadecenoic acid/triethanolamine  
 reaction products 77-78-1D, Dimethyl sulfate, quaternized with  
 fatty acid/triethanolamine reaction products 77-92-9, uses  
 78-59-1 78-69-3 78-70-6 78-79-5D, Isoprene, reaction  
 products with acetic acid 78-83-1, uses 78-92-2, 2-Butanol  
 79-07-2 79-08-3 79-11-8, uses 79-11-8D, Chloroacetic acid,  
 reaction products with N-C10-16-alkyltrimethylenediamines  
 79-11-8D, Acetic acid, chloro-, reaction products with  
 diethylenetriamine N-mono- and di-C8-18-alkyl derivs., uses  
 79-14-1, uses 79-20-9 79-21-0, Ethaneperoxoic acid 79-69-6  
 79-92-5D, 2,2-Dimethyl-3-methylenebicyclo[2.2.1]heptane, reaction  
 products with 2-methoxyphenol, hydrogenated 80-26-2 80-27-3  
 80-46-6 80-71-7 81-07-2D, 1,2-Benzisothiazol-3(2H)-one  
 1,1-dioxide, salts with quaternary ammonium compds.,  
 benzyl-C12-18-alkyldimethyl (1:1) 81-14-1 81-15-2 81-81-2  
 81-82-3 82-66-6 83-34-1 83-79-4 84-65-1,  
 9,10-Anthracenedione 84-66-2 84-74-2 85-91-6 87-10-5  
 87-17-2 87-20-7 87-22-9 87-90-1 88-04-0 88-06-2  
 88-14-2, 2-Furancarboxylic acid 88-84-6 89-68-9 89-78-1  
 89-79-2 89-83-8 90-05-1D, Phenol, 2-methoxy-, reaction  
 products with 2,2-dimethyl-3-methylenebicyclo[2.2.1]heptane,  
 hydrogenated 90-13-1 90-17-5 90-43-7, [1,1'-Biphenyl]-2-ol  
 90-43-7D, [1,1'-Biphenyl]-2-ol, chlorinated 90-87-9 91-20-3,  
 Naphthalene, uses 91-61-2 91-64-5, 2H-1-Benzopyran-2-one  
 93-15-2 93-16-3 93-51-6 93-59-4, Benzenecarboperoxoic acid  
 93-65-2 93-69-6 93-89-0 94-13-3 94-18-8 94-26-8  
 94-36-0, uses 94-96-2 95-14-7, 1H-Benzotriazole 95-41-0  
 95-48-7, uses 96-24-2 96-29-7 97-23-4 97-24-5 97-54-1  
 97-77-8 98-01-1, 2-Furancarboxaldehyde, uses 98-11-3D,  
 Benzenesulfonic acid, mono-C10-14-alkyl derivs., compds. with Me  
 1H-benzimidazol-2-ylcarbamate, uses 98-53-3 98-55-5 99-49-0  
 99-76-3 99-86-5 100-37-8 100-44-7, uses 100-51-6,  
 Benzenemethanol, uses 100-52-7, Benzaldehyde, uses 100-73-2  
 100-86-7 100-89-0 100-97-0, uses 101-20-2 101-21-3  
 101-39-3 101-53-1 101-84-8 101-85-9 102-17-0 102-20-5  
 102-30-7 102-71-6D, copper complexes 102-71-6D,  
 Triethanolamine, reaction products with 9-octadecenoic acid, di-Me  
 sulfate-quaternized 102-98-7 103-05-9 103-26-4 103-52-6  
 103-82-2, Benzeneacetic acid, uses 103-95-7 104-09-6  
 104-21-2 104-29-0 104-53-0, Benzenepropanal 104-54-1  
 104-55-2 104-60-9 104-61-0 104-62-1 104-67-6 104-76-7  
 104-78-9 104-87-0 105-01-1 105-66-8 105-85-1 105-87-3  
 105-90-8 106-22-9 106-24-1 106-25-2 106-30-9 106-44-5,  
 uses 106-46-7 106-70-7 106-72-9 106-73-0 106-79-6  
 106-88-7 106-89-8, uses 107-02-8, 2-Propenal, uses  
 107-21-1D, Ethylene glycol, reaction products with formaldehyde  
 107-22-2, Ethanedial 107-41-5 107-43-7 107-75-5 107-95-9D,  
 β-Alanine, N-coco alkyl derivs. 108-16-7 108-39-4, uses  
 108-64-5 108-80-5, 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione  
 108-88-3, uses 108-89-4 108-94-1, Cyclohexanone, uses  
 108-95-2, Phenol, uses 108-95-2D, Phenol, polypropene derivs.,  
 uses 108-99-6 109-21-7 109-89-7, uses 110-05-4 110-15-6,  
 Butanedioic acid, uses 110-27-0 110-38-3 110-41-8 110-44-1  
 110-58-7, 1-Pentanamine 110-62-3, Pentanal 110-75-8  
 110-86-1, Pyridine, uses 110-89-4, Piperidine, uses 111-11-5

111-27-3, 1-Hexanol, uses 111-30-8, Pentanediol 111-40-0D, 1,2-Ethanediamine, N-(2-aminoethyl)-, reaction products with 1-chlorooctane 111-40-0D, Diethylenetriamine, reaction products with chloroacetic acid, N-mono- and di-C8-18-alkyl derivs. 111-41-1D, 2-(2-Aminoethyl)aminoethanol, reaction with coco fatty acids, quaternized 111-42-2, uses (bactericide combinations in detergents)

IT 1120-24-7 1120-48-5 1121-30-8 1121-31-9 1123-85-9  
 1135-66-6 1192-52-5 1205-17-0 1209-61-6 1222-05-5  
 1300-71-6 1303-28-2, Arsenic oxide (As<sub>2</sub>O<sub>5</sub>) 1303-86-2, Boron oxide (B<sub>2</sub>O<sub>3</sub>), uses 1303-96-4D, Borax (B<sub>4</sub>Na<sub>2</sub>O<sub>7</sub>·10H<sub>2</sub>O), reaction products with sulfuric acid 1305-78-8, Calcium oxide, uses 1309-48-4, Magnesium oxide (MgO), uses 1310-58-3, Potassium hydroxide (K(OH)), uses 1310-73-2, Sodium hydroxide (Na(OH)), uses 1314-13-2, Zinc oxide (ZnO), uses 1314-84-7, Zinc phosphide (Zn<sub>3</sub>P<sub>2</sub>) 1317-38-0, Copper oxide (CuO), uses 1317-39-1, Copper oxide (Cu<sub>2</sub>O), uses 1319-77-3 1320-44-1 1322-14-1 1323-00-8 1327-53-3, Arsenic oxide (As<sub>2</sub>O<sub>3</sub>) 1330-43-4, Boron sodium oxide (B<sub>4</sub>Na<sub>2</sub>O<sub>7</sub>) 1331-83-5 1332-07-6 1332-65-6, Copper chloride hydroxide (Cu<sub>2</sub>Cl(OH)<sub>3</sub>) 1333-53-5 1333-58-0 1333-82-0, Chromium oxide (CrO<sub>3</sub>) 1333-83-1, Sodium fluoride (Na(HF<sub>2</sub>)) 1334-78-7 1335-10-0 1335-12-2 1335-46-2 1341-49-7, Ammonium fluoride ((NH<sub>4</sub>)(HF<sub>2</sub>)) 1405-92-1 1414-45-5, Nisin A 1438-94-4 1446-61-3 1490-04-6 1634-02-2 1643-20-5 1696-17-9 1715-30-6 1777-82-8 1854-23-5 1854-26-8 1875-89-4 1885-38-7 1892-43-9 1897-45-6 1983-10-4 2016-56-0 2019-69-4 2032-65-7 2050-08-0 2090-05-3 2104-96-3 2120-70-9 2155-70-6 2216-51-5 2224-44-4 2244-16-8 2244-21-5 2275-23-2 2279-96-1, Butanediperoxoic acid 2305-25-1 2310-17-0 2372-82-9 2374-05-2 2390-68-3 2436-90-0 2439-10-3 2445-76-3 2463-53-8, 2-Nonenal 2491-38-5 2492-26-4 2500-83-6 2527-57-3 2527-58-4 2565-36-8 2571-88-2 2631-40-5 2634-33-5, 1,2-Benzisothiazol-3(2H)-one 2639-63-6 2682-20-4 2756-56-1 2782-57-2 2832-19-1 2871-78-5 2875-41-4D, Glycine, N-(3-aminopropyl)-, N'-C10-16-alkyl derivs., hydrochlorides 2893-78-9 2921-88-2 3006-10-8 3033-23-6 3064-70-8 3090-35-5 3142-72-1 3228-02-2 3302-10-1 3313-92-6 3332-27-2 3380-34-5 3383-96-8 3398-33-2 3547-33-9 3586-55-8 3691-35-8 3696-28-4 3697-42-5 3710-84-7 3766-81-2 3784-03-0 3785-34-0 3811-68-5 3811-73-2 3811-75-4 3851-97-6 3926-62-3D, Acetic acid, chloro-, sodium salt, reaction products with 4,5-dihydro-1H-imidazole-1-ethanol 2-norcoco alkyl derivs. and sodium hydroxide 3926-62-3D, Sodium chloroacetate, reaction products with B-C12-18 alkylmethylenediamines 3984-22-3 4075-81-4 4080-31-3 4151-50-2 4169-04-4 4180-23-8 4182-44-9 4191-73-5 4247-02-3 4299-07-4 4299-60-9 4317-72-0 4317-79-7 4342-36-3 4454-05-1D, reaction products with ethanol 4525-33-1 4574-04-3 4602-84-0 4707-47-5 4719-04-4 4724-48-5 4824-78-6 4940-11-8 5026-62-0 5039-78-1 5153-25-3 5197-80-8 5329-14-6, Sulfamic acid 5332-73-0 5392-40-5 5395-50-6 5437-45-6 5454-19-3 5462-06-6 5471-51-2 5538-94-3 5538-95-4 5598-13-0 5625-90-1 5725-96-2 5836-29-3 5915-41-3 5972-76-9 6001-64-5 6011-99-0 6051-03-2 6152-33-6 6317-18-6 6324-78-3 6378-65-0 6413-26-9 6440-58-0 6485-40-1 6542-37-6 6582-31-6 6834-92-0 6843-97-6 6915-15-7 6939-35-1 6988-21-2 7080-50-4 7166-19-0 7173-51-5 7173-62-8

7281-04-1 7287-19-6 7320-34-5 7378-99-6 7440-22-4, Silver,  
 uses 7440-50-8, Copper, uses 7446-20-0, Zinc sulfate  
 heptahydrate 7491-20-5 7491-21-6 7492-67-3 7540-51-4  
 7549-37-3 7553-56-2, Iodine, uses 7601-54-9D, Trisodium  
 phosphate, chlorinated 7631-89-2 7631-90-5 7632-04-4  
 7637-07-2D, Boron trifluoride, reaction products with 2-propanol  
 and 5-ethylidenebicyclo[2.2.1]hept-2-ene 7640-33-7 7646-85-7,  
 Zinc chloride (ZnCl<sub>2</sub>), uses 7647-01-0, Hydrochloric  
 acid, uses 7647-15-6, Sodium bromide (NaBr), uses 7664-38-2,  
 Phosphoric acid, uses 7664-41-7, Ammonia, uses 7664-93-9  
 , Sulfuric acid, uses 7681-49-4, Sodium fluoride (NaF), uses  
 7681-52-9 7681-55-2 7681-57-4 7681-93-8 7696-12-0  
 7697-37-2, Nitric acid, uses 7699-45-8, Zinc bromide  
 (ZnBr<sub>2</sub>) 7704-34-9, Sulfur, uses 7722-64-7 7722-84-1,  
 Hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>), uses 7722-86-3, Peroxymonosulfuric  
 acid 7726-95-6, Bromine, uses 7727-21-1 7733-02-0  
 7747-35-5 7757-81-5 7757-83-7 7758-02-3, Potassium bromide  
 (KBr), uses 7758-19-2 7758-89-6, Copper chloride (CuCl)  
 7758-98-7, Sulfuric acid copper(2+) salt (1:1), uses 7758-99-8  
 7775-09-9 7775-27-1 7778-39-4, Arsenic acid (H<sub>3</sub>AsO<sub>4</sub>)  
 (bactericide combinations in detergents)  
 IT 7778-43-0 7778-50-9 7778-54-3 7778-66-7 7779-27-3  
 7779-73-9 7779-78-4 7779-81-9 7782-44-7, Oxygen, uses  
 7782-50-5, Chlorine, uses 7783-20-2, Sulfuric acid diammonium  
 salt, uses 7783-90-6, Silver chloride (AgCl), uses 7786-29-0  
 7786-30-3, Magnesium chloride (MgCl<sub>2</sub>), uses 7789-09-5  
 7789-12-0 7789-29-9, Potassium fluoride (K(HF<sub>2</sub>)) 7789-33-5,  
 Iodine bromide (IBr) 7790-28-5 7790-99-0, Iodine chloride  
 (ICl) 7803-51-2, Phosphine 8000-41-7, Terpeneol 8007-35-0  
 8018-01-7 9001-37-0 9002-91-9 9003-07-0D, Polypropylene,  
 phenol derivs. 9003-29-6 9003-63-8 9003-99-0, Peroxidase  
 9004-82-4 9004-98-2 10028-15-6, Ozone, uses 10031-43-3  
 10032-15-2 10043-35-3, Boric acid (H<sub>3</sub>BO<sub>3</sub>), uses  
 10049-04-4, Chlorine oxide (ClO<sub>2</sub>) 10058-23-8 10101-41-4  
 10124-37-5 10154-75-3 10187-52-7 10198-23-9 10222-01-2  
 10222-01-2 10235-63-9 10294-64-1 10332-33-9 10339-55-6  
 10345-79-6 10377-60-3 10378-23-1 10380-28-6 10453-86-8  
 10460-00-1 10482-56-1 10486-00-7 10543-57-4 10588-01-9  
 10588-15-5 10595-49-0 10605-21-7 10605-21-7D, Methyl  
 1H-benzimidazol-2-ylcarbamate, compds. with benzenesulfonic acid  
 mono-C10-14-alkyl derivs. 11031-45-1, Santalol 11050-62-7  
 11084-85-8, Sodium hypochlorite phosphate (Na<sub>13</sub>(ClO)(PO<sub>4</sub>)<sub>4</sub>)  
 11096-42-7 12008-41-2, Boron sodium oxide (B<sub>8</sub>Na<sub>2</sub>O<sub>13</sub>)  
 12062-24-7 12069-69-1 12122-67-7 12124-97-9, Ammonium  
 bromide ((NH<sub>4</sub>)Br) 12179-04-3 12267-73-1 12280-03-4  
 12427-38-2 13014-03-4 13019-22-2, 9-Decen-1-ol 13052-19-2  
 13108-52-6 13149-79-6 13167-25-4 13197-76-7 13254-34-7  
 13351-61-6 13426-91-0 13435-05-7 13463-41-7 13463-67-7,  
 Titanium oxide (TiO<sub>2</sub>), uses 13516-27-3 13517-11-8, Hypobromous  
 acid 13532-18-8 13590-97-1 13701-59-2 13707-65-8  
 13720-12-2 13755-29-8 13824-96-9 13826-83-0 13840-33-0  
 13863-41-7, Bromine chloride (BrCl) 13877-91-3 13980-04-6  
 14073-97-3 14371-10-9 14548-60-8 14576-08-0 14667-55-1  
 14676-61-0D, 1-Propanamine, 3-(tridecyloxy)-, branched  
 14762-38-0 14816-18-3 14915-37-8 14936-67-5 15323-35-0  
 15435-29-7 15510-55-1 15627-09-5 15630-89-4 15707-23-0  
 15733-22-9 15739-09-0 15809-19-5 15986-80-8 16079-88-2  
 16219-75-3D, 5-Ethylidenebicyclo[2.2.1]hept-2-ene, reaction  
 products with boron trifluoride and 2-propanol 16228-00-5  
 16409-43-1 16491-36-4 16752-77-5 16828-95-8 16871-71-9

16893-85-9 16919-19-0 16949-65-8 16961-83-4 17084-08-1  
 17342-21-1 17804-35-2 18181-70-9 18181-80-1 18205-85-1  
 18339-16-7 18472-51-0 18479-54-4 18479-57-7 18675-16-6  
 18675-17-7 18794-84-8 18829-56-6 18854-01-8 18972-56-0  
 19014-05-2 19093-20-0 19379-90-9 19388-87-5 19578-81-5  
 19766-89-3 19819-98-8 19870-74-7 20013-73-4 20018-09-1  
 20543-04-8 20545-92-0 20662-57-1 20679-58-7 20834-59-7  
 20859-73-8, Aluminum phosphide (AlP) 21129-27-1 21145-77-7  
 21564-17-0 21757-82-4 21834-92-4 22009-37-6 22205-45-4,  
 Copper sulfide (Cu<sub>2</sub>S) 22221-10-9 22248-79-9 22781-23-3  
 22882-89-9 22882-91-3 22936-75-0 22981-54-0 23031-36-9  
 23495-12-7 23560-59-0 23564-05-8 23726-92-3 23726-94-5  
 23787-90-8 24019-05-4 24048-13-3 24111-17-9 24124-25-2  
 24291-45-0 24634-61-5 24720-09-0 24851-98-7 25068-14-8  
 25155-18-4 25155-29-7 25167-82-2 25225-10-9 25254-50-6  
 25265-71-8 25304-14-7 25377-70-2 25628-84-6 25655-41-8  
 25988-97-0 26002-80-2 26062-79-3 26172-55-4 26248-98-6  
 26354-18-7 26530-03-0 26530-20-1 26545-49-3 26617-87-8  
 26635-93-8 26781-23-7 27083-27-8 27176-87-0 27236-65-3  
 27253-29-8 27323-41-7 27697-50-3 28069-74-1 28159-98-0  
 28219-61-6 28302-36-5 28387-62-4 28434-00-6 28434-01-7  
 28558-32-9 28645-51-4, Oxacycloheptadec-10-en-2-one 28728-61-2  
 28772-56-7 28777-01-7 28805-58-5 29232-93-7 29350-73-0

(bactericide combinations in detergents)

IT 65-85-0, Benzoic acid, uses

(r; bactericide combinations in detergents)

L72 ANSWER 26 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:338671 HCAPLUS

DOCUMENT NUMBER: 134:354862

TITLE: Detergents or cleaning agents

INVENTOR(S): Lange, Ilona; Ditze, Alexander; Gies, Birgit;  
 Soldanski, Heinz-Dieter; Wendt, Heike; Nitsch,  
 Christian; Hardt, Thomas

PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien,  
 Germany

SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001032820	A1	20010510	WO 2000-EP10393	2000 1021
W: AU, BR, CA, CN, CZ, DZ, HU, ID, IL, IN, JP, KR, MX, PL, RO, RU, SG, SI, SK, TR, UA, US, ZA				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19952383	A1	20010517	DE 1999-19952383	1999 1030
EP 1224256	A1	20020724	EP 2000-978973	2000 1021
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,				

MC, PT, IE, SI, FI, RO, CY  
 PRIORITY APPLN. INFO.:

DE 1999-19952383

A

1999  
 1030

WO 2000-EP10393

W

2000  
 1021

OTHER SOURCE(S): MARPAT 134:354862

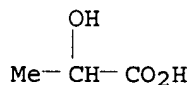
AB The detergents or cleaning agents contain surfactants and optionally other conventional ingredients, as well as 0.5-20% particles with a particle size of 5-500 nm. The agents impart to the surface to be cleaned temporary dirt-repellent properties. The particles are preferably SiO<sub>2</sub>, Mg(OH)<sub>2</sub>, Al(O)OH, ZrO<sub>2</sub>, ZnO, CeO<sub>2</sub>, Fe<sub>2</sub>O<sub>3</sub>, Fe<sub>3</sub>O<sub>4</sub>, TiO<sub>2</sub>, TiN, hydroxylapatite, bentonite, hectorite, SiO<sub>2</sub>.CeO<sub>2</sub>, SnO<sub>2</sub>, In<sub>2</sub>O<sub>3</sub>.SnO<sub>2</sub>, and/or HfO<sub>2</sub>, the surface of which has preferably been modified with phosphonates or heavy metal-complexing agents. The particles are intended to remain temporarily on the surface being cleaned, essentially completely covering it and rendering it hydrophilic.

IT 50-21-5, Lactic acid, uses 87-69-4, Tartaric acid, uses 526-95-4, Gluconic acid 6915-15-7, Malic acid

(detergents or cleaning agents containing nanoparticles with surfaces modified by)

RN 50-21-5 HCAPLUS

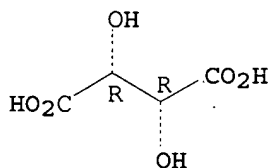
CN Propanoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)



RN 87-69-4 HCAPLUS

CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)- (9CI) (CA INDEX NAME)

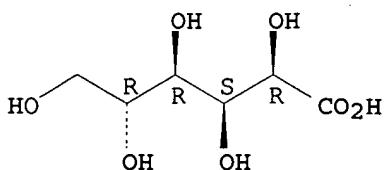
Absolute stereochemistry.



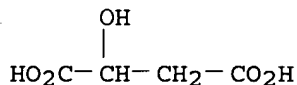
RN 526-95-4 HCAPLUS

CN D-Gluconic acid (9CI) (CA INDEX NAME)

Absolute stereochemistry.

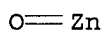


RN 6915-15-7 HCAPLUS  
CN Butanedioic acid, hydroxy- (9CI) (CA INDEX NAME)



IT 1314-13-2, Zinc oxide, uses  
(surface-modified; detergents or cleaning agents containing  
hydrophilic nanoparticles)

RN 1314-13-2 HCAPLUS  
CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)



IC ICM C11D017-00  
ICS C11D003-12  
CC 46-6 (Surface Active Agents and Detergents)  
ST particulate hydrophilizing agent detergent compn  
; nanoscale particle hydrophilizing agent  
IT 50-21-5, Lactic acid, uses 60-00-4, EDTA, uses  
77-92-9, Citric acid, uses 87-69-4, Tartaric acid, uses  
139-13-9, NTA 526-95-4, Gluconic acid 2809-21-4,  
1-Hydroxyethane-1,1-diphosphonic acid 6419-19-8,  
Nitrilotris(methylenephosphonic acid) 6915-15-7, Malic  
acid 15827-60-8, Diethylenetriaminepentakis(methylenephosphonic  
acid) 37971-36-1, 2-Phosphonobutane-1,2,4-tricarboxylic acid  
(detergents or cleaning agents containing nanoparticles with  
surfaces modified by)  
IT 1306-06-5, Hydroxylapatite 1306-38-3, Ceric oxide, uses  
1309-37-1, Ferric oxide, uses 1309-42-8, Magnesium hydroxide  
1314-13-2, Zinc oxide, uses  
1314-23-4, Zirconium dioxide, uses 1317-61-9, Iron oxide  
(Fe3O4), uses 1318-23-6, Boehmite 7631-86-9, Silica, uses  
12055-23-1, Hafnium oxide 12173-47-6, Hectorite 13463-67-7,  
Titanium dioxide, uses 18282-10-5, Stannic oxide 25583-20-4,  
Titanium nitride 58440-24-7, Indium tin oxide (In2SnO5)  
317832-92-1, Cerium silicate (CeSiO4)  
(surface-modified; detergents or cleaning agents containing  
hydrophilic nanoparticles)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L72 ANSWER 27 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:36219 HCAPLUS

DOCUMENT NUMBER: 134:58274

TITLE: Polyoxyethylene alkyl carboxymethyl ether  
divalent metal salts for detergent  
compositions and their preparation

INVENTOR(S): Sun, Baoxing

PATENT ASSIGNEE(S): Green Chemical Products Research Center, Peop.  
Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 6  
pp.



DOCUMENT TYPE: CODEN: CNXXEV  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: Chinese  
 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1255485	A	20000607	CN 1999-117217	1999 1115
CN 1086185	B	20020612	CN 1999-117217	1999 1115

PRIORITY APPLN. INFO.: CN 1999-117217

OTHER SOURCE(S): MARPAT 134:58274

AB The polyoxyethylene alkyl carboxymethyl ether divalent metal salt [RO(CH<sub>2</sub>CH<sub>2</sub>O)<sub>n</sub>CH<sub>2</sub>COO]<sub>2</sub>M (R = C<sub>1</sub>-30 alkyl; M = divalent metal ion; n = 1-50) is prepared by reacting a polyoxyethylene monoalkyl ether (e.g., polyoxyethylene monotetradecyl ether) with chloroacetic acid at 1-150° with continuously adding Na<sub>2</sub>CO<sub>3</sub>, K<sub>2</sub>CO<sub>3</sub>, NaOH, or KOH, removing the salt, and mixing with a divalent metal salt (e.g., magnesium chloride hexahydrate). The polyoxyethylene alkyl carboxymethyl ether divalent metal salts are useful as surfactants in detergent compns. having good detergency and biodegradability.

IT 7646-85-7, Zinc chloride, reactions  
 (preparation of polyoxyethylene alkyl carboxymethyl ether divalent metal salts for **cleaning compns.**)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

IC ICM C07C059-125

ICS C07C051-41

CC 46-6 (Surface Active Agents and **Detergents**)

IT 79-11-8, Chloroacetic acid, reactions 7646-85-7, Zinc chloride, reactions 7786-30-3, Magnesium chloride, reactions 9002-92-0, Polyethylene glycol monododecyl ether 9005-00-9, Polyethylene glycol monooctadecyl ether 10034-99-8, Magnesium sulfate heptahydrate 13477-34-4, Calcium nitrate tetrahydrate 24938-91-8, Polyethylene glycol monotridecyl ether 27306-79-2, Polyethylene glycol monotetradecyl ether  
 (preparation of polyoxyethylene alkyl carboxymethyl ether divalent metal salts for **cleaning compns.**)

L72 ANSWER 28 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:688339 HCAPLUS

DOCUMENT NUMBER: 133:268593

TITLE: **Liquid automatic dishwashing composition** with glassware protection and its use

INVENTOR(S): Keyes, George B.; Seaman, Charles E.; Kassen, Jon K.

PATENT ASSIGNEE(S): S. C. Johnson Commercial Markets, Inc., USA

SOURCE: PCT Int. Appl., 24 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

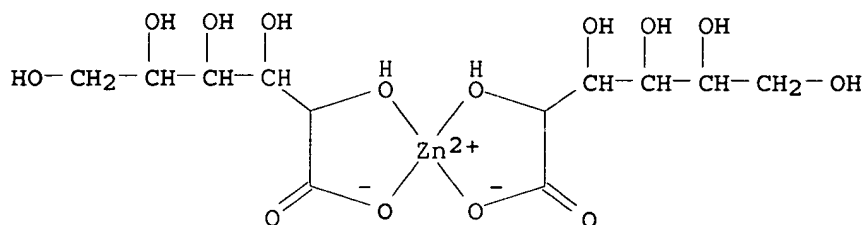
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000056851	A1	20000928	WO 2000-US6129	2000 0309
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6083894	A	20000704	US 1999-272133	1999 0319
US 6448210	B1	20020910	US 2000-504360	2000 0215
GB 2364324	A1	20020123	GB 2001-24033	2000 0309
GB 2364324	B2	20040121		
PRIORITY APPLN. INFO.:			US 1999-272133	A 1999 0319
			US 2000-504360	A 2000 0215
			WO 2000-US6129	W 2000 0309

AB A liquid dishwashing detergent  
 composition having improved glassware protection when employed  
 in conjunction with cleaning materials having high concns. of alkaline  
 materials contains a soluble organic zinc compound which preferably is  
 zinc gluconate and is particularly suited to fast cycle com. (I &  
 I) dishwashers. The zinc gluconate is prepared in situ or  
 zinc and gluconic ions are provided in a batching process.

IT 4468-02-4, Zinc gluconate  
 (in liquid automatic dishwashing  
 compns. with glassware protection)

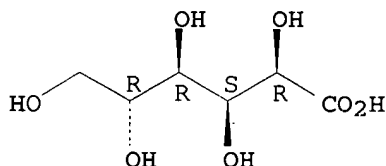
RN 4468-02-4 HCAPLUS

CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA  
 INDEX NAME)



IT 526-95-4, Gluconic acid 1314-13-2, Zinc  
oxide, reactions 7733-02-0, Zinc sulfate  
(source of zinc gluconate; in liquid automatic  
dishwashing compns. with glassware  
protection)  
RN 526-95-4 HCAPLUS  
CN D-Gluconic acid (9CI) (CA INDEX NAME)

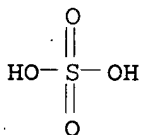
Absolute stereochemistry.



RN 1314-13-2 HCAPLUS  
CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)



RN 7733-02-0 HCAPLUS  
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



IC ICM C11D003-20  
ICS C11D007-06; C11D007-26  
CC 46-6 (Surface Active Agents and Detergents)  
ST zinc gluconate dishwasher detergent glassware protection  
IT **Detergents**  
(dishwashing, liquid; liquid  
automatic dishwashing compns. with  
glassware protection)  
IT Glass, uses

(liquid automatic dishwashing compns  
 . with glassware protection)  
 IT 64-02-8, EDTA tetrasodium salt 4468-02-4, Zinc gluconate  
 5064-31-3, Trisodium nitrilotriacetate  
 (in liquid automatic dishwashing  
 compns. with glassware protection)  
 IT 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium  
 hydroxide, uses  
 (in liquid automatic dishwashing  
 compns. with glassware protection)  
 IT 526-95-4, Gluconic acid 527-07-1, Sodium gluconate  
 1314-13-2, Zinc oxide, reactions  
 7733-02-0, Zinc sulfate  
 (source of zinc gluconate; in liquid automatic  
 dishwashing compns. with glassware  
 protection)  
 REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L72 ANSWER 29 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2000:454294 HCAPLUS  
 DOCUMENT NUMBER: 133:75677  
 TITLE: Liquid automatic dishwashing  
 composition with glassware protection  
 from hard water wash  
 INVENTOR(S): Keyes, George B.; Seaman, Charles; Kassen, Jon  
 K.  
 PATENT ASSIGNEE(S): S. C. Johnson Commercial Markets, Inc., USA  
 SOURCE: U.S., 8 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6083894	A	20000704	US 1999-272133	1999 0319
US 6448210	B1	20020910	US 2000-504360	2000 0215
WO 2000056851	A1	20000928	WO 2000-US6129	2000 0309
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG GB 2364324 A1 20020123 GB 2001-24033				

2000  
0309

GB 2364324 B2 20040121  
ES 2192976 A1 20031016 ES 2001-50071

2000  
0309

ES 2192976 B2 20040801  
PRIORITY APPLN. INFO.: US 1999-272133 A2

1999  
0319

US 2000-504360 A

2000  
0215

WO 2000-US6129 W

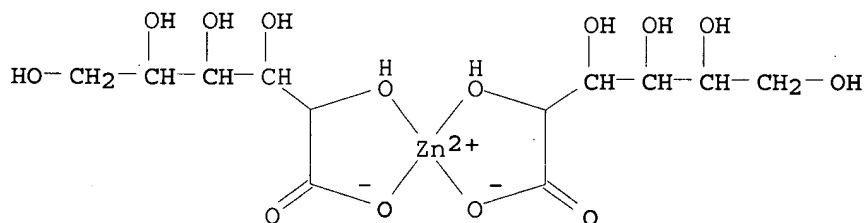
2000  
0309

AB A liquid dishwashing detergent  
composition provides improved glassware protection when  
employed in conjunction with cleaning materials having high  
concns. of alkaline materials. The composition contains a soluble organic Zn  
compound, preferably Zn gluconate, and is particularly suited to  
fast cycle com. dishwashers. An example  
dishwashing detergent contained H<sub>2</sub>O 17.20, trisodium NTA  
68.50, NaOH 4.00, KOH 5.00, Dequest 2010 0.3, and zinc gluconate  
5.00%.

IT 4468-02-4, Zinc gluconate  
(liquid automatic dishwashing compn  
. containing soluble zinc salts for reduced corrosion of glassware in  
com. dishwashing apparatus)

RN 4468-02-4 HCAPLUS

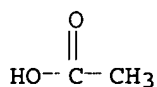
CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA  
INDEX NAME)



IT 557-34-6, Zinc acetate 557-41-5, Zinc formate  
(liquid automatic dishwashing compn  
. containing soluble zinc salts for reduced corrosion of glassware in  
com. dishwashing apparatus)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

RN 557-41-5 HCAPLUS  
CN Formic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

IC ICM C11D007-06  
ICS C11D007-16  
INCL 510221000  
CC 46-5 (Surface Active Agents and Detergents)  
ST zinc gluconate **dishwashing** detergent; liq  
automatic **dishwashing** detergent glassware  
protection  
IT **Detergents**  
(**dishwashing**; liquid automatic  
**dishwashing composition** containing soluble zinc salts for  
reduced corrosion of glassware in com. **dishwashing**  
apparatus)  
IT Glass, uses  
(glassware; liquid automatic **dishwashing**  
**composition** containing soluble zinc salts for reduced corrosion of  
glassware in com. **dishwashing** apparatus)  
IT 64-02-8, Tetrasodium EDTA 2809-21-4, Dequest 2010 5064-31-3  
(chelate; liquid automatic **dishwashing**  
**composition** containing soluble zinc salts for reduced corrosion of  
glassware in com. **dishwashing** apparatus)  
IT 4468-02-4, Zinc gluconate  
(liquid automatic **dishwashing compn**  
. containing soluble zinc salts for reduced corrosion of glassware in  
com. **dishwashing** apparatus)  
IT 557-34-6, Zinc acetate 557-41-5, Zinc formate  
1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium  
hydroxide, uses  
(liquid automatic **dishwashing compn**  
. containing soluble zinc salts for reduced corrosion of glassware in  
com. **dishwashing** apparatus)  
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L72 ANSWER 30 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1999:113737 HCAPLUS  
DOCUMENT NUMBER: 130:169841  
TITLE: Process for preparing ether-capped  
poly(oxyalkylated) alcohols for use as

INVENTOR(S): nonionic surfactants with low foaming property  
 Sivik, Mark Robert  
 PATENT ASSIGNEE(S): The Procter & Gamble Company, USA  
 SOURCE: PCT Int. Appl., 23 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9906468	A1	19990211	WO 1998-US16034	1998 0731
W: BR, CA, MX, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2297831	AA	19990211	CA 1998-2297831	1998 0731
EP 998517	A1	20000510	EP 1998-938252	1998 0731
EP 998517	B1	20031015		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
BR 9811816	A	20000815	BR 1998-11816	1998 0731
AT 252127	E	20031115	AT 1998-938252	1998 0731
ES 2205531	T3	20040501	ES 1998-938252	1998 0731
US 6365785	B1	20020402	US 2000-485137	2000 0202
PRIORITY APPLN. INFO.:			US 1997-54702P	P 1997 0802
			WO 1998-US16034	W 1998 0731

AB The surfactants are compds.  $R1O[CH_2CH(R_3)O]_xCH_2CH(OH)CH_2OR_2$  ( $R_1$ ,  $R_2$  = linear or branched, saturated or unsatd., aliphatic or aromatic hydrocarbyl groups having from 1 to 30 carbon atoms;  $R_3$  = H, or a linear aliphatic hydrocarbyl groups having from 1 to 4 carbon atoms;  $x$  = 6-15; when  $x$  is 2 or greater  $R_3$  may be the same or different; further wherein when  $x$  is 15 or greater and  $R_3$  is H and Me, at least 4 of  $R_3$  are Me, further wherein when  $x$  is 15 or greater and  $R_3$  includes H and from 1 to 3 Me groups, then at least 1  $R_3$  is Et, Pr or Bu, further wherein  $R_2$  can optionally be alkoxylated, wherein said alkoxy is selected from ethoxy, propoxy, butyloxy and mixts. thereof) and prepared by reacting a glycidyl ether bearing  $R_2$  as ether group with a poly(oxyalkylated) alc. The surfactants

have superior spotting and filming benefits in **dishwashing** and hard surface cleaning applications, as well as suds suppression in **detergent compns.** Thus, heating 16.60 g Neodol 91-8 (ethoxylated C9-11 alc.) with 0.25 mL Sn(IV) chloride to 60°, adding dropwise 10.00 g C12-14 alkyl glycidyl ether to the resulting mixture over 15 min while maintaining at 75-80°, stirring at 60° for 18 h and at 75° for 1 h, , cooling and working up gave an oil. An automatic **dishwashing detergent** was formulated from Na tripolyphosphate 24.0, Na<sub>2</sub>CO<sub>3</sub> 20.0, hydrate silica 15, 15, the oil 2.0, Tergitol 15S9 (nonionic surfactant) 1.0, an acrylic polymer 4.0, 4%-active protease 0.83, 0.8%-active amylase 0.5, 15.5%-active perborate monohydrate 14.5, Co catalyst 0.008, and balance of water, Na<sub>2</sub>SO<sub>4</sub> and miscellaneous to 100%.

IT 7646-85-7, Zinc chloride, uses  
(catalyst; process for preparing ether-capped poly(oxyalkylated)  
alcs. for use as nonionic surfactants with low foaming  
property)  
RN 7646-85-7 HCAPLUS  
CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

IC ICM C08G065-26  
ICS C08G065-22; C11D001-72  
CC 46-3 (Surface Active Agents and **Detergents**)  
ST nonionic surfactant ether capped alkoxyated alc low foaming;  
spotting suppression nonionic surfactant ether capped alkoxyated  
alc; sud suppression nonionic surfactant ether capped alkoxyated  
alc; automatic **dishwashing** detergent ether capped  
alkoxyated alc; cleaning detergent ether capped alkoxyated alc  
IT **Detergents**  
(**dishwashing**; process for preparing ether-capped  
poly(oxyalkylated) alcs. for use as nonionic surfactants with  
low foaming property)  
IT **Detergents**  
(**liquid**; process for preparing ether-capped  
poly(oxyalkylated) alcs. for use as nonionic surfactants with  
low foaming property)  
IT 109-63-7 7446-70-0, Aluminum chloride, uses 7550-45-0,  
Titanium chloride, uses 7646-78-8, Tin(IV) chloride, uses  
7646-85-7, Zinc chloride, uses  
(catalyst; process for preparing ether-capped poly(oxyalkylated)  
alcs. for use as nonionic surfactants with low foaming  
property)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L72 ANSWER 31 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1998:493233 HCAPLUS  
DOCUMENT NUMBER: 129:137670  
TITLE: Enzyme compositions and methods for contact  
lens cleaning  
INVENTOR(S): Huth, Stanley W.  
PATENT ASSIGNEE(S): Allergan, USA  
SOURCE: U.S., 12 pp., Cont.-in-part of U.S. 5,630,884.  
CODEN: USXXAM



DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

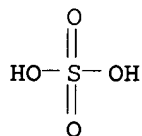
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5783532	A	19980721	US 1996-696708	1996 0814
US 5630884	A	19970520	US 1996-673993	1996 0701
US 5746838	A	19980505	US 1996-755801	1996 1122
US 6165954	A	20001226	US 1998-20664	1998 0209
PRIORITY APPLN. INFO.:			US 1993-79195	B1 1993 0617
			US 1994-343284	B3 1994 1122
			US 1996-673993	A2 1996 0701
			US 1996-755801	A3 1996 1122

AB The title compns. (tableted) comprise an enzyme (e.g. Subilisin A) which is released rapidly in a liquid medium to remove debris from a contact lens and an activity regulating component such as a base, metal salt, etc. which is released later to deactivate the enzyme, optionally a disinfectant.

IT 7733-02-0, Zinc sulfate  
 (enzyme compns. for **cleaning** contact lens  
 with delayed deactivation of enzyme)

RN 7733-02-0 HCAPLUS

CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

IC ICM C11D003-00

INCL 510114000

CC 46-6 (Surface Active Agents and Detergents)

Section cross-reference(s): 63

IT 139-33-3, EDTA, disodium salt 7632-05-5, Sodium phosphate  
7733-02-0, Zinc sulfate(enzyme **comps.** for **cleaning** contact lens

with delayed deactivation of enzyme)

REFERENCE COUNT: 68 THERE ARE 68 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L72 ANSWER 32 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:552569 HCAPLUS

DOCUMENT NUMBER: 127:150425

TITLE: Household hard surface liquid cleaning  
compositionsINVENTOR(S): Gordon, Neil James; Reniers, Vincent; Willey,  
Alan David

PATENT ASSIGNEE(S): Procter &amp; Gamble Company, USA

SOURCE: PCT Int. Appl.; 25 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9724425	A1	19970710	WO 1995-US17044	1995 1229
W: AU, CA, CN, CZ, HU, JP, MX, US RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2241815	AA	19970710	CA 1995-2241815	1995 1229
CA 2241815	C	20030527		
AU 9646486	A1	19970728	AU 1996-46486	1995 1229
EP 876458	A1	19981111	EP 1995-944437	1995 1229
EP 876458	B1	20000809		
EP 876458	B2	20041208		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
JP 11501978	T2	19990216	JP 1995-524289	1995 1229
CN 1209831	A	19990303	CN 1995-198022	1995 1229
HU 78046	A2	19990728	HU 1999-830	1995 1229
ES 2148594	T3	20001016	ES 1995-944437	1995

PT 876458 T 20001229 PT 1995-944437 1229  
1995  
1229  
US 5990066 A 19991123 US 1998-101072 1998  
0612  
GR 3034496 T3 20001229 GR 2000-402185 2000  
0928  
PRIORITY APPLN. INFO.: CA 1995-2241815 A 1995  
1229  
CN 1995-198022 A 1995  
1229  
EP 1995-944437 A 1995  
1229  
WO 1995-US17044 A 1995  
1229

AB The title compns. provide excellent gloss to the surfaces cleaned therewith and comprise a surfactant, a carboxylate-containing polymer (A) and a divalent counter ion (B) in A/B molar ratio of 12:1 to 1:32. The inclusion of A and B improves the gloss of cleaned surface. In an example, Sokolan CP5 and CaCl<sub>2</sub>.2H<sub>2</sub>O were used as A and B, resp., beside other ordinary surfactants and additives.

IT 7646-85-7, Zinc chloride (ZnCl<sub>2</sub>), uses  
(household hard surface liquid cleaning compns.)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

IC ICM C11D003-37

ICS C11D003-22; C11D017-00; C11D003-02

CC 46-6 (Surface Active Agents and Detergents)

IT 7487-88-9, Magnesium sulfate, uses 7646-85-7, Zinc chloride (ZnCl<sub>2</sub>), uses 9004-32-4 10043-52-4, Calcium chloride (CaCl<sub>2</sub>), uses 58339-75-6, Primal B 924  
(household hard surface liquid cleaning compns.)

L72 ANSWER 33 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:509236 HCAPLUS

DOCUMENT NUMBER: 127:207337

TITLE: Thermoplastic polymer compositions as cleaning agents for molding apparatus

INVENTOR(S): Nakajima, Yoichi; Saito, Takanori

PATENT ASSIGNEE(S): Chisso Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09194628	A2	19970729	JP 1996-22971	1996 0117
JP 3579700	B2	20041020	JP 1996-22971	1996 0117

PRIORITY APPLN. INFO.: JP 1996-22971

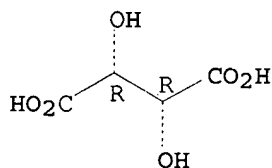
AB Title compns. contain thermoplastics, polyol higher fatty acid partial ester-H<sub>3</sub>BO<sub>3</sub> complexes, and  $\geq 1$  metal compds. chosen from oxides, hydroxides, carbonates, phosphates, silicates, hydrotalcites, Li-Al mixed hydroxides, fatty acid salts, aliphatic hydroxy acid salts, and aliphatic phosphates. Thus, high-d. polyethylene 90.1, glyceryl monostearate borate 9.5, MgO 0.3, phenol antioxidant 0.05, and P-containing antioxidant 0.05% were mixed to give a detergent, which show good removing of ABS resin residue on an injection molding apparatus

IT 551-64-4, Zinc tartrate, uses  
 (detergent compns.; for cleaning  
 molding apparatus for plastics)

RN 551-64-4 HCAPLUS

CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)-, zinc salt (1:1) (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.



● Zn

IC ICM C08K005-00

ICS C08L101-00

CC 46-6 (Surface Active Agents and Detergents)

Section cross-reference(s): 38

IT 72-17-3, Sodium lactate 127-09-3, Sodium acetate 144-55-8, Carbonic acid monosodium salt, uses 471-34-1, Calcium carbonate, uses 497-19-8, Sodium carbonate, uses 546-89-4, Lithium acetate 546-93-0D, Magnesium carbonate, basic 551-64-4, Zinc tartrate, uses 554-13-2, Lithium carbonate 584-08-7, Potassium carbonate 814-80-2, Calcium lactate 1305-62-0, Calcium hydroxide, uses 1305-78-8, Calcium oxide, uses 1309-42-8, Magnesium hydroxide 1312-76-1, Potassium silicate 1314-13-2, Zinc oxide, uses 1338-43-8D, boron complexes 1343-88-0, Magnesium silicate 1344-09-8, Sodium silicate

1344-28-1, Aluminum oxide, uses 1592-23-0, Calcium stearate  
 3164-85-0, Potassium 2-ethylhexanoate 3486-35-9, Zinc carbonate  
 4040-48-6, Magnesium laurate 7440-42-8D, Boron, complexes with  
 sorbitan monooleate, uses 7558-79-4, Disodium hydrogen phosphate  
 7778-49-6, Potassium citrate 7778-53-2, Potassium phosphate  
 7779-90-0, Zinc phosphate 10043-83-1, Magnesium phosphate  
 10103-46-5, Calcium phosphate 10377-52-3, Lithium phosphate  
 11097-59-9, HDT 4A 12627-14-4, Lithium silicate 14807-96-6,  
 Talc, uses 20427-58-1, Zinc hydroxide 21645-51-2, Aluminum  
 hydroxide, uses 31142-56-0, Aluminum citrate 39663-84-8,  
 Lithium glycolate 52660-30-7 134206-92-1 136939-35-0,  
 Mizukalac 149725-09-7 168832-54-0, Zinc octadecanoyl lactate  
 194553-23-6 194553-24-7 194553-25-8 194553-26-9  
 194553-27-0 194553-28-1 194553-29-2 194553-31-6

(detergent compns.; for cleaning  
 molding apparatus for plastics)

L72 ANSWER 34 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:509235 HCAPLUS

DOCUMENT NUMBER: 127:207336

TITLE: Thermoplastic polymer compositions  
 as detergents for cleaning molding  
 apparatus

INVENTOR(S): Nakajima, Yoichi; Saito, Takanori

PATENT ASSIGNEE(S): Chisso Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09194627	A2	19970729	JP 1996-22970	1996 0117
JP 3579699	B2	20041020	JP 1996-22970	1996 0117

PRIORITY APPLN. INFO.: JP 1996-22970

AB Title compns. contain thermoplastics, polyol higher fatty acid  
 partial esters, H<sub>3</sub>BO<sub>3</sub>, and ≥1 metal compds. chosen from  
 oxides, hydroxides, carbonates, phosphates, silicates,  
 hydrotalcites, Li-Al mixed hydroxides, fatty acid salts, aliphatic  
 hydroxy acid salts, and aliphatic phosphates. Thus, high-d.  
 polyethylene 89.3, glyceryl monostearate 9.5, H<sub>3</sub>BO<sub>3</sub> 0.8, MgO 0.3,  
 phenol antioxidant 0.05, and P-containing antioxidant 0.05% were mixed  
 to give a detergent, which show good removing of ABS resin residue  
 on an injection molding apparatus

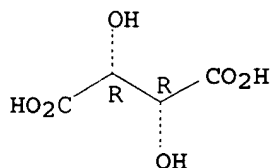
IT 551-64-4, Zinc tartrate, uses 1314-13-2,  
 Zinc oxide, uses 10043-35-3, Boric  
 acid, uses  
 (cleaning compns.; thermoplastic  
 compns. as detergents for cleaning molding  
 apparatus)

RN 551-64-4 HCAPLUS

CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)-, zinc salt (1:1) (9CI)

(CA INDEX NAME)

Absolute stereochemistry.

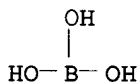


● Zn

RN 1314-13-2 HCAPLUS  
 CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)

O= Zn

RN 10043-35-3 HCAPLUS  
 CN Boric acid (H3BO3) (6CI, 8CI, 9CI) (CA INDEX NAME)



- IC ICM C08K005-00  
 ICS C08L101-00; C11D007-02; C11D007-06; C11D007-08; C11D007-12;  
 C11D007-14; C11D007-16; C11D007-22; C11D007-26
- CC 46-6 (Surface Active Agents and **Detergents**)  
 Section cross-reference(s): 38
- ST thermoplastic detergent molding app cleaning; polyol fatty ester  
 thermoplastic mold cleaning; boric acid **compn**  
**cleaning** molding app; carbonate molding app  
**cleaning compn**; phosphate molding app  
**cleaning compn**; silicate molding app  
**cleaning compn**; hydroxide molding app  
**cleaning compn**; oxide molding app  
**cleaning compn**; glyceride molding app  
**cleaning compn**
- IT Ethylene-propylene rubber  
 (cleaning **compns.**; thermoplastic  
**compns.** as **detergents** for cleaning molding  
 apparatus)
- IT Carbonates, uses  
 Hydroxides (inorganic)  
 Oxides (inorganic), uses  
 Phosphates, uses  
 Silicates, uses  
 (cleaning **compns.**; thermoplastic  
**compns.** as **detergents** for cleaning molding  
 apparatus)
- IT Carboxylic acids, uses  
 (hydroxy, salts, **cleaning compns.**;

- thermoplastic compns. as detergents for  
cleaning molding apparatus)
- IT Fatty acids, uses  
Fatty acids, uses  
(long-chain, esters, cleaning compns.;  
thermoplastic compns. as detergents for  
cleaning molding apparatus)
- IT Fatty acids, uses  
(metal salts, cleaning compns.;  
thermoplastic compns. as detergents for  
cleaning molding apparatus)
- IT Alcohols, uses  
(polyhydric, esters, cleaning compns.;  
thermoplastic compns. as detergents for  
cleaning molding apparatus)
- IT **Detergents**  
Molding apparatus for plastics and rubbers  
Molds (forms)  
(thermoplastic compns. as detergents for  
cleaning molding apparatus)
- IT Plastics, uses  
(thermoplastics, cleaning compns.;  
thermoplastic compns. as detergents for  
cleaning molding apparatus)
- IT 9002-86-2, Poly(vinyl chloride) 9002-88-4, Polyethylene  
9003-07-0, Polypropylene 9003-53-6, Styron 600 9003-56-9  
24937-78-8, Ultrathene 631  
(cleaning compns.; thermoplastic  
compns. as detergents for cleaning molding  
apparatus)
- IT 72-17-3, Sodium lactate 106-14-9D, basic magnesium salt  
127-09-3, Sodium acetate 144-55-8, Carbonic acid monosodium  
salt, uses 471-34-1, Calcium carbonate, uses 497-19-8, Sodium  
carbonate, uses 546-89-4, Lithium acetate 546-93-0D, Magnesium  
carbonate, basic 551-64-4, Zinc tartrate, uses  
554-13-2, Lithium carbonate 584-08-7, Potassium carbonate  
814-80-2, Calcium lactate 1305-62-0, Calcium hydroxide, uses  
1305-78-8, Calcium oxide, uses 1309-42-8, Magnesium hydroxide  
1309-48-4, Magnesium oxide, uses 1312-76-1, Potassium silicate  
1314-13-2, Zinc oxide, uses  
1338-43-8, Sorbitan monooleate 1343-88-0, Magnesium silicate  
1344-09-8, Sodium silicate 1344-28-1, Aluminum oxide, uses  
1592-23-0, Calcium stearate 3164-85-0, Potassium  
2-ethylhexanoate 3486-35-9, Zinc carbonate 4040-48-6,  
Magnesium laurate 7558-79-4, Disodium hydrogen phosphate  
7778-49-6, Potassium citrate 7778-53-2, Potassium phosphate  
7779-90-0, Zinc phosphate 10043-35-3, Boric acid, uses  
10043-83-1, Magnesium phosphate 10103-46-5, Calcium phosphate  
10332-31-7, Pentaerythritol monolaurate 10377-52-3, Lithium  
phosphate 11097-59-9, DHT 4A 12627-14-4, Lithium silicate  
14807-96-6, Talc, uses 20427-58-1, Zinc hydroxide 21645-51-2,  
Aluminum hydroxide, uses 31142-56-0, Aluminum citrate  
31566-31-1, Glyceryl monostearate 39663-84-8, Lithium glycolate  
53126-66-2, Potassium propyl phosphate 68258-72-0,  
Pentaerythritol dibehenate 134206-92-1 136939-35-0, Mizukalac  
149725-09-7 168832-54-0, Zinc octadecanoyl lactate 194553-25-8  
194553-26-9 194553-28-1 194553-29-2 194553-31-6  
(cleaning compns.; thermoplastic  
compns. as detergents for cleaning molding  
apparatus)

IT 9010-79-1

(ethylene-propylene rubber, **cleaning compns**  
.; thermoplastic **compns.** as **detergents** for  
cleaning molding apparatus)

L72 ANSWER 35 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:740260 HCAPLUS

DOCUMENT NUMBER: 126:9479

TITLE: Environmentally friendly nontoxic  
water-soluble cleaning compositions for  
release of polymers from surfaces

INVENTOR(S): Sakata, Shigenobu

PATENT ASSIGNEE(S): Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08239693	A2	19960917	JP 1995-81645	1995 0302

PRIORITY APPLN. INFO.: JP 1995-81645

1995  
0302

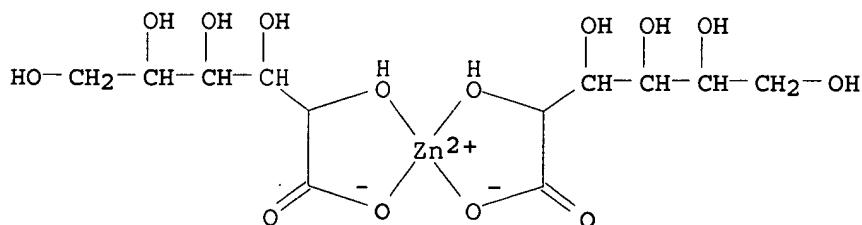
AB The compns. comprise Na chondroitinsulfate (I), cyclodextrin (II), xanthan gum (III), xylan, xylose, Na pantothenate (IV), Na pyruvate (V), Na erythorbate (VI), 4-isopropyltropone (VII), H<sub>2</sub>O, benzyl alc. (VIII), and iso-PrOH and optionally contain monosaccharides, polysaccharides, antioxidants, lactic acids, preservatives, bactericides, secondary alcs., higher alcs., amino alcs., and/or microorganisms. An aqueous solution containing 70% mixture of I ≤25, xylan 0.1-0.5, xylose 0.1-0.5, glucose 0.1-0.5, III 0.1-0.5, II 1-3, VII 0.01-0.05, IV 1-5, V 1-5, VI 1-5, 10% VIII, and 20% iso-PrOH exhibited good polymer release properties on contacting a polymer coating on a metal surface with the solution for 5-10 min at room temperature

IT 4468-02-4, Zinc gluconate

(environment friendly nontoxic water-soluble **cleaning**  
**compns.** for release of polymers from surfaces containing)

RN 4468-02-4 HCAPLUS

CN Zinc, bis(D-gluconato-κO1,κO2)-, (T-4)- (9CI) (CA  
INDEX NAME)





IC ICM C11D007-22  
ICS C11D007-26

CC 46-6 (Surface Active Agents and Detergents)

IT 50-14-6, Ergocalciferol 50-21-5, uses 50-70-4, D-Glucitol, uses 50-81-7, L-Ascorbic acid, uses 50-99-7, D-Glucose, uses 56-81-5, 1,2,3-Propanetriol, uses 57-48-7, D-Fructose, uses 57-50-1, Sucrose, uses 57-55-6, 1,2-Propanediol, uses 58-56-0, Pyridoxine hydrochloride 58-86-6, D-Xylose, uses 59-23-4, D-Galactose, uses 59-30-3, Folic acid, uses 59-51-8, Methionine 59-67-6, Nicotinic acid, uses 60-12-8,  $\beta$ -Phenylethyl alcohol 60-24-2, 2-Mercaptoethanol 63-68-3, L-Methionine, uses 63-91-2, L-Phenylalanine, uses 64-17-5, Ethanol, uses 64-19-7, Acetic acid, uses 67-56-1, Methanol, uses 67-63-0, Isopropyl alcohol, uses 67-97-0, Cholecalciferol 69-65-8, Mannit 72-18-4, L-Valine, uses 72-19-5, L-Threonine, uses 73-22-3, L-Tryptophane, uses 73-32-5, L-Isoleucine, uses 75-08-1, Ethyl mercaptan 78-98-8, Methylglyoxal 80-68-2, DL-Threonine 83-88-5, Riboflavine, uses 87-89-8, myo-Inositol 89-65-6, Erythorbic acid 90-43-7, o-Phenylphenol 92-52-4, Diphenyl, uses 94-13-3, Propyl p-hydroxybenzoate 94-26-8, Butyl p-hydroxybenzoate 97-64-3 98-00-0, Furfuryl alcohol 98-92-0, Nicotinamide 99-76-3, Methylparaben 100-51-6, Benzyl alcohol, uses 107-18-6, Allyl alcohol, uses 110-17-8, 2-Butenedioic acid (E)-, uses 110-44-1, Sorbic acid 111-70-6, Heptyl alcohol 112-70-9, Tridecyl alcohol 112-92-5, 1-Octadecanol 113-24-6, Sodium pyruvate 120-47-8, Ethyl p-hydroxybenzoate 121-79-9, Propyl gallate 122-99-6 123-51-3 127-17-3, uses 132-27-4, Sodium o-phenylphenolate 134-03-2, Sodium L-ascorbate 137-08-6, Calcium pantothenate 137-40-6, Sodium propionate 138-22-7, Butyl lactate 143-08-8, Nonyl alcohol 299-28-5, Calcium gluconate 299-29-6, Ferrous gluconate 299-88-7, Dibenzoylthiamine 453-17-8, Triose 497-15-4, Reductone 499-44-5, 4-Isopropyltropolone 500-38-9, Nordihydroguaiaretic acid 501-94-0, p-Hydroxyphenethyl alcohol 520-45-6, Dehydroacetic acid 527-09-3, Copper gluconate 532-32-1, Sodium benzoate 547-64-8, Methyl lactate 619-73-8, p-Nitrobenzyl alcohol 628-89-7, 2-(2-Chloroethoxy)ethanol 814-80-2, Calcium lactate 867-81-2, Sodium pantothenate 1007-42-7, L-Histidine hydrochloride 1114-41-6, Muramic acid 1398-61-4, Chitin 2338-05-8, Iron citrate 4075-81-4, Calcium propionate 4191-73-5, Isopropyl p-hydroxybenzoate 4247-02-3, Isobutyl p-hydroxybenzoate 4396-19-4 4418-26-2, Sodium dehydroacetate 4468-02-4, Zinc gluconate 6381-77-7, Sodium erythorbate 7296-64-2, Galactose 7492-55-9, Calcium sorbate 7558-94-3 7632-50-0, Ammonium citrate 7693-13-2, Calcium citrate 7732-18-5, Water, uses 7757-93-9, Calcium monohydrogen phosphate 7758-23-8, Calcium dihydrogen phosphate 7758-87-4, Tricalcium phosphate 8028-98-6, Acetol 9000-07-1, Carrageenan 9000-69-5, Pectinic acid 9002-89-5, Poly(vinyl alcohol) 9004-34-6, Cellulose, uses 9004-61-9, Hyaluronic acid 9005-25-8, Starch, uses 9005-32-7, Alginic acid 9005-49-6, Heparin, uses 9005-79-2, Glycogen, uses 9005-80-5, Inulin 9007-27-6, Chondroitin 9007-28-7, Chondroitinsulfuric acid 9012-72-0, Glucan 9013-95-0, Levan 9014-63-5, Xylan 9034-32-6, Hemicellulose 9036-88-8, Mannan 9037-55-2, Galactan 9037-90-5, Fructan 9041-38-7, Teichoic acid 9050-30-0 9056-36-4, Keratan sulfate 9057-02-7, Pullulan 9060-75-7, L-Arabinan 9072-19-9, Fucoidan 9082-07-9, Sodium chondroitinsulfate 10098-89-2, L-Lysine hydrochloride 10191-41-0, DL- $\alpha$ -Tocopherol 11013-97-1, Methylhesperidin

11138-66-2, Xanthan gum 12619-70-4, Cycloamylose 13656-81-0,  
 4-Isopropyltropone 14866-19-4, Calcium dihydrogen pyrophosphate  
 22251-85-0 25013-16-5, Butylhydroxyanisole 25322-68-3  
 27458-93-1, Isostearyl alcohol 30587-81-6, Dibutylhydroxytoluene  
 32038-79-2, Ethynol 35660-60-7, Dibenzoylthiamine hydrochloride  
 36653-82-4, 1-Hexadecanol 37251-79-9, Teichuronic acid  
 39413-05-3, Isopropyl citrate 39479-63-5, Thiaminelauryl sulfate  
 50603-32-2, Dihydroxybutyric acid 51222-59-4 53106-52-8,  
 Pentose 55963-73-0, Protuberic acid 65644-56-6, Calcium  
 glycerate 71927-65-6, Heptose 81671-99-0, Thiatetrazole  
 93780-23-5, Hexose 144314-88-5 162874-49-9, Kadoran  
 184047-20-9, Octose 184047-21-0, Nonose 184047-22-1, Decose  
 184047-23-2, Hexos-2-ulose  
 (environment friendly nontoxic water-soluble **cleaning**  
**compns.** for release of polymers from surfaces containing)

L72 ANSWER 36 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:702040 HCAPLUS

DOCUMENT NUMBER: 126:33495

TITLE: Carbonate built non-bleaching laundry  
 detergent composition containing a polymeric  
 polycarboxylate and a zinc salt

INVENTOR(S): Carr, Charles D.

PATENT ASSIGNEE(S): Church and Dwight Co., Inc., USA

SOURCE: U.S., 7 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 5574004	A	19961112	US 1994-340064	

1994  
 1115

PRIORITY APPLN. INFO.: US 1994-340064

1994  
 1115

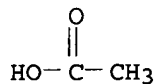
AB In the title non-bleaching laundry detergent composition, the solids comprises an active surfactant,  $\geq 70\%$  of a water soluble alkaline carbonate, e.g., sodium carbonate, a minor amount of a polymeric polycarboxylate, e.g., an acrylic acid polymer, and a minor amount of elemental zinc in the form of a water soluble salt, e.g., a hydrated or anhydrous zinc sulfate, such as zinc sulfate heptahydrate or monohydrate, based on the total weight of solids in the composition. Incorporation of a polymeric polycarboxylate and zinc ions in the foregoing laundry detergent composition containing carbonate ions has the effect of significantly reducing fabric encrustation caused by the precipitation of calcium carbonate.

IT 557-34-6, Zinc acetate 7646-85-7, Zinc chloride, uses 7733-02-0, Zinc sulfate 7779-88-6, Zinc nitrate

(carbonate built non-bleaching laundry  
 detergent composition containing a polymeric  
 polycarboxylate and a zinc salt)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)

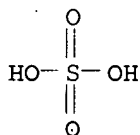


● 1/2 Zn

RN 7646-85-7 HCAPLUS  
CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

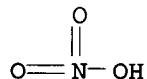
Cl-Zn-Cl

RN 7733-02-0 HCAPLUS  
CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

RN 7779-88-6 HCAPLUS  
CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

IC ICM C11D003-10  
ICS C11D003-04; C11D003-60; C11D017-06  
INCL 510361000  
CC 46-5 (Surface Active Agents and Detergents)  
IT 497-19-8, Sodium carbonate, uses 546-46-3, Zinc citrate.  
557-34-6, Zinc acetate 7446-19-7, Zinc sulfate  
monohydrate 7446-20-0, Zinc sulfate heptahydrate  
7646-85-7, Zinc chloride, uses 7733-02-0, Zinc  
sulfate 7779-88-6, Zinc nitrate 9003-01-4D, Acrylic  
acid homopolymer, neutralized 9003-16-1D, neutralized  
25087-26-7D, Methacrylic acid homopolymer, neutralized  
25119-64-6D, Itaconic acid homopolymer, neutralized 25322-68-3D,  
ethers with C12-15 alc. 25751-21-7, Acrylic acid-methacrylic  
acid copolymer 26099-09-2D, Maleic acid homopolymer, neutralized

28259-96-3D, neutralized 28259-97-4D, neutralized  
 (carbonate built non-bleaching laundry  
 detergent composition containing a polymeric  
 polycarboxylate and a zinc salt)

L72 ANSWER 37 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1995:855939 HCAPLUS  
 DOCUMENT NUMBER: 123:260432  
 TITLE: Stabilized aqueous enzyme solutions, and  
 liquid detergent concentrates containing the  
 enzyme  
 INVENTOR(S): Zehetmair, Josef K.  
 PATENT ASSIGNEE(S): Diversey Corp., Can.  
 SOURCE: PCT Int. Appl., 26 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9506101	A1	19950302	WO 1994-CA463	1994 0825
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN RW: KE, MW, SD, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2153066	AA	19950302	CA 1994-2153066	1994 0825
CA 2153066	C	19980210		
AU 9474883	A1	19950321	AU 1994-74883	1994 0825
AU 686653	B2	19980212		
EP 672100	A1	19950920	EP 1994-924673	1994 0825
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
ZA 9406535	A	19950403	ZA 1994-6535	1994 0826
PRIORITY APPLN. INFO.:				
			US 1993-112681	A
				1993 0826
			WO 1994-CA463	W
				1994 0825

AB The solns. contain water and  $\geq 1$  of amylase, protease, and  
 cellulase, and an ionic compound containing a cation other than Ca, B,  
 Mn, Mg, and Zn, and having effective nuclear charge  $>2.6$ .

Optionally, the solns. may contain a carboxylic acid and a surfactant. The ionic compound is selected from salts of  $\geq 1$  of Sr, Ce, Y, Yb, La. The liquid detergent concs. comprise water 10-70, ionic compound 0.01-2, additive in the form of O-anion source 0.1-4, and nonionic surfactant 8-40 weight%, and protease  $\geq 10$  ppm. These compns. inhibit the degradation of the mol. structure of the enzyme.

IT 7646-85-7, Zinc chloride, uses  
(stabilized aqueous enzyme solns., and liquid  
detergent concs. containing the enzyme)  
RN 7646-85-7 HCAPLUS  
CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl- Zn- Cl

IC ICM C11D003-386  
CC 46-3 (Surface Active Agents and Detergents)  
IT 57-55-6, Propyleneglycol, uses 141-53-7, Sodium formate  
141-95-7, Sodium malonate 371-47-1, Sodium maleate 537-00-8,  
Cerium acetate 1314-36-9, Yttria, uses 7439-91-0D, Lanthanum,  
salts 7440-24-6D, Strontium, salts 7440-45-1D, Cerium, salts  
7440-64-4D, Ytterbium, salts 7440-65-5D, Yttrium, salts  
7646-85-7, Zinc chloride, uses 7790-86-5, Cerium  
chloride 10043-52-4, Calcium chloride, uses 10361-91-8,  
Ytterbium chloride 10361-92-9, Yttrium chloride 10476-85-4,  
Strontium chloride 23363-14-6, Yttrium acetate 169314-36-7,  
Tamol 6-1588  
(stabilized aqueous enzyme solns., and liquid  
detergent concs. containing the enzyme)

L72 ANSWER 38 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:789454 HCAPLUS

DOCUMENT NUMBER: 123:173654

TITLE: Cleaning solutions and cleaning therewith for  
removal of alkali metals adsorbed on  
semiconductor substrate surface

INVENTOR(S): Nakajima, Kazuji; Okui, Yoshiko

PATENT ASSIGNEE(S): Fujitsu Ltd, Japan; Fujitsu Vlsi Ltd

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

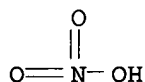
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 07169727	A2	19950704	JP 1993-314599	1993 1215
PRIORITY APPLN. INFO.:				JP 1993-314599
				1993 1215

AB The title cleaning solns. contain water and metallic element  
having higher adsorption effects than alkali metal toward the part  
being cleaned. Adsorption of alkali metal (e.g., Na) on Si

substrate could be reduced by the presence of Ca, Mg, Al, Fe, Cr, Cu, Mn, Zn, and Ni (as nitrates).

IT 7779-88-6, Zinc nitrate  
(cleaning solns. and cleaning  
therewith for removal of alkali metals adsorbed on  
semiconductor substrate surface)  
RN 7779-88-6 HCAPLUS  
CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

IC ICM H01L021-304  
ICS C11D007-02  
CC 46-6 (Surface Active Agents and Detergents)  
Section cross-reference(s): 76  
IT 7779-88-6, Zinc nitrate 10124-37-5, Calcium nitrate  
10377-60-3, Magnesium nitrate 10377-66-9, Manganese nitrate  
10402-29-6, Copper nitrate 13138-45-9, Nickel nitrate  
13473-90-0, Aluminum nitrate 13548-38-4, Chromium nitrate  
14104-77-9, Iron nitrate  
(cleaning solns. and cleaning  
therewith for removal of alkali metals adsorbed on  
semiconductor substrate surface)

L72 ANSWER 39 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1994:460260 HCAPLUS  
DOCUMENT NUMBER: 121:60260  
TITLE: Detergent composition showing pH increase upon  
dilution  
INVENTOR(S): Schepers, Frederick Jan  
PATENT ASSIGNEE(S): Unilever N. V., Neth.; Unilever PLC  
SOURCE: Eur. Pat. Appl., 10 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

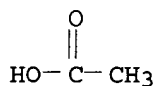
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 588413	A1	19940323	EP 1993-202577	1993 0902
R: CH, DE, ES, FR, GB, IT, LI, NL, SE CA 2105703	AA	19940316	CA 1993-2105703	1993 0908
PRIORITY APPLN. INFO.:		US 1992-945188	A	1992 0915

AB The title composition contains a N-containing compound and a salt of Group 1B-8B and/or Group 3A-4A metal. The low pH of the composition before dilution increases the stability of bleaching agents and enzymes during storage. A composition containing water 42.3, Na citrate 6.8, citric acid 2.4, NaOH 3.2, NH<sub>3</sub> 0.9, decoupling polymer (acrylic) 1.0, Zn acetate 5.2, dodecylbenzenesulfonic acid 26.2, and Neodol 25-9 12.0% showed pH 6.5 and was diluted (1.5 g/L water) to give a solution with pH 8.3.

IT 557-34-6, Zinc acetate  
(liquid laundry detergents containing,  
for pH increase upon dilution)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

IC ICM C11D003-04  
ICS C11D003-26; C11D003-39; C11D003-386

CC 46-5 (Surface Active Agents and Detergents)

IT 557-34-6, Zinc acetate 993-02-2, Manganic acetate 7447-39-4, Cupric chloride, uses 7720-78-7, Ferrous sulfate 10028-22-5, Ferric sulfate 10043-01-3, Aluminum sulfate (liquid laundry detergents containing, for pH increase upon dilution)

L72 ANSWER 40 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:561645 HCAPLUS

DOCUMENT NUMBER: 115:161645

TITLE: Deodorizing and cleaning compositions and methods

INVENTOR(S): Hutchings, Richard S.; Haber, Mary K.

PATENT ASSIGNEE(S): Bristol-Myers Squibb Co., USA

SOURCE: Eur. Pat. Appl., 10 pp.  
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
EP 424845	A2	19910502	EP 1990-120218	1990 1022
EP 424845	A3	19930210		
EP 424845	B1	19970409		
R: DE, FR, GB, IT, SE				
US 5076960	A	19911231	US 1989-425738	1989 1023
CA 2027753	AA	19910424	CA 1990-2027753	

1990  
1016  
CA 2027753 C 19970520  
AU 9064873 A1 19910426 AU 1990-64873  
1990  
1022  
AU 637414 B2 19930527  
JP 03176063 A2 19910731 JP 1990-283604  
1990  
1023  
JP 05065189 B4 19930917  
PRIORITY APPLN. INFO.: US 1989-425738 A  
1989  
1023  
AB Aqueous compns. having pH 4-11 and containing an alkali metal halogenite (especially Na chlorite) and a salt of a transition or post-transition metal are useful for the deodorization of malodorous substrates (e.g., for eliminating smoke, kitchen, and toilet odors) and the cleaning and disinfection of soiled substrates. The compns. contain stabilizer (e.g., Na citrate or iso-PrOH) which inhibit the formation of malodorous ClO<sub>2</sub> during storage. A composition contains Na chlorite 0.4, ZnCl<sub>2</sub> 0.1, iso-PrOH 5, and H<sub>2</sub>O 94.9%.  
IT 7646-85-7, Zinc chloride, uses and miscellaneous  
(deodorizing and **cleaning**-disinfecting **solns**  
. containing sodium chlorite and, storage-stable)  
RN 7646-85-7 HCAPLUS  
CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

IC ICM C11D003-395  
ICS C11D003-48  
CC 46-6 (Surface Active Agents and **Detergents**)  
IT 866-82-0, Cupric citrate 7447-39-4, Cupric chloride, uses and miscellaneous 7646-78-8, Stannic chloride, uses and miscellaneous 7646-85-7, Zinc chloride, uses and miscellaneous 7705-08-0, Ferric chloride, uses and miscellaneous 7758-98-7, Cupric sulfate, uses and miscellaneous 7772-99-8, Stannous chloride, uses and miscellaneous 10025-73-7, Chromium chloride (CrCl<sub>3</sub>) 15593-15-4, Copper chloride (CuCl<sub>2</sub>)  
(deodorizing and **cleaning**-disinfecting **solns**  
. containing sodium chlorite and, storage-stable)

L72 ANSWER 41 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1991:452324 HCAPLUS  
DOCUMENT NUMBER: 115:52324  
TITLE: Liquid detergent compositions for hard surfaces  
INVENTOR(S): Kakiuchi, Hidesuke; Ishii, Makoto; Ikoma, Kyoko; Nakae, Tokuo  
PATENT ASSIGNEE(S): Kao Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:



PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03079700	A2	19910404	JP 1989-215737	1989 0822
JP 07056038	B4	19950614	JP 1989-215737	1989 0822

PRIORITY APPLN. INFO.:

AB The title compns. (pH 4-12) safe to plastics under stress contain poloxyalkylene surfactants and/or monohydroxy or polyhydroxy alc. (derivative) solvents, and 0.1-5% water-soluble inorg. metal salt(s) chosen from alkaline earth metal, Al, and Zn halides and ZnSO<sub>4</sub>. An ABS piece adhered on a PVC pipe (with 0.74% strain) showed no cracks after it was soaked in an aqueous solution containing 1% polyoxyalkylene alkyl ether and 2% MgCl<sub>2</sub>, wiped with a tissue paper, and left at 20° and 65% relative humidity for 24 h.

IT 7646-85-7, Zinc chloride, uses and miscellaneous  
7733-02-0, Zinc sulfate  
(liquid detergents containing, for ABS resins)

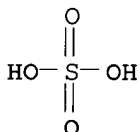
RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

RN 7733-02-0 HCAPLUS

CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

IC ICM C11D003-04  
ICS C11D001-68; C11D001-72

CC 46-6 (Surface Active Agents and Detergents)

IT 7446-70-0, Aluminum chloride, uses and miscellaneous  
7646-85-7, Zinc chloride, uses and miscellaneous  
7733-02-0, Zinc sulfate 7786-30-3, Magnesium chloride,  
uses and miscellaneous 10043-52-4, Calcium chloride, uses and  
miscellaneous  
(liquid detergents containing, for ABS resins)

L72 ANSWER 42 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:499918 HCAPLUS

DOCUMENT NUMBER: 113:99918

TITLE: Noncorrosive alkaline cleaning  
compositions for aluminum utensils

INVENTOR(S): Corring, Robert John; Lamberti, Vincent;  
 Aronson, Michael Paul  
 PATENT ASSIGNEE(S): Unilever PLC, UK  
 SOURCE: Brit. UK Pat. Appl., 26 pp.  
 CODEN: BAXXDU  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2224286	A1	19900502	GB 1989-22356	1989 1004
GB 2224286	B2	19920122		
US 4992212	A	19910212	US 1988-259072	1988 1018
CA 2000536	AA	19900418	CA 1989-2000536	1989 1012
CA 2000536	C	19960702		
PRIORITY APPLN. INFO.:			US 1988-259072	A 1988 1018

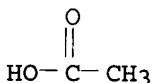
OTHER SOURCE(S): MARPAT 113:99918

AB The title compns. contain H<sub>2</sub>O, 1-10% base, 0.1-4% Zn salt, 0.1-10% complexing agent, and 0.2-30% anionic surfactant and have pH 9-11. An aqueous mixture of 3.75% hydrogenated glucose syrup, 9.0% Na xylenesulfonate, 3.5% ethanolamine alkylbenzenesulfonate, 14.0% Na alkylbenzenesulfonate, 12% Neodol 23-3 S, 4.0% lauric-myristic ethanolamide, 2.0% ethanolamine, 3% Zn(OAc)<sub>2</sub>, and 1 mol citrate salt/mol Zn, when diluted to 1%, did not attain an Al tile in 30 min contact; vs. heavy staining without Zn(OAc)<sub>2</sub> and citrate.

IT 557-34-6, Zinc acetate  
 (in noncorrosive, alkaline cleaners for aluminum utensils)

RN 557-34-6 HCAPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

IC ICM C11D003-60

CC 46-6 (Surface Active Agents and Detergents)

ST cleaner aluminum corrosion inhibitor; zinc salt cleaner aluminum;  
 citrate cleaner aluminum noncorrosive; **dishwashing**  
 detergent aluminum noncorrosive

IT Corrosion inhibitors  
 (for alkaline cleaning compns. for aluminum  
 utensils)

## IT Detergents

(dishwashing, liquid, for aluminum utensils,  
corrosion inhibitors for)

IT 52-90-4, L-Cysteine, uses and miscellaneous 56-40-6, Glycine,  
uses and miscellaneous 56-87-1, L-Lysine, uses and miscellaneous  
60-00-4, EDTA, uses and miscellaneous 72-19-5, L-Threonine, uses  
and miscellaneous 74-79-3, L-Arginine, uses and miscellaneous  
77-92-9, uses and miscellaneous 95-14-7, 1H-Benzotriazole  
139-13-9, Nitrilotriacetic acid 141-43-5, uses and miscellaneous  
147-85-3, Proline, uses and miscellaneous 302-84-1, DL-Serine  
557-34-6, Zinc acetate 994-36-5, Sodium citrate  
6419-19-8 7408-18-6, Oxydisuccinic acid 15827-60-8  
38945-27-6, (Carboxymethoxy)succinic acid  
(in noncorrosive, alkaline cleaners for aluminum utensils)

L72 ANSWER 43 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1989:156603 HCAPLUS

DOCUMENT NUMBER: 110:156603

TITLE: Liquid thixotropic machine  
dishwashing composition

containing a structuring system

INVENTOR(S): Elliott, David Leroy; Christiano, Steven  
Patrick; Lang, David John; Sisco, Rosemary  
Margaret

PATENT ASSIGNEE(S): Unilever PLC, UK; Unilever N. V.

SOURCE: Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 295093	A1	19881214	EP 1988-305256	1988 0609
EP 295093	B1	19910605		
R: CH, DE, ES, FR, GB, IT, LI, NL, SE				
US 4954280	A	19900904	US 1988-202087	1988 0602
CA 1315640	A1	19930406	CA 1988-569046	1988 0609
AU 8817619	A1	19881215	AU 1988-17619	1988 0610
AU 596310	B2	19900426		
JP 01004699	A2	19890109	JP 1988-143449	1988 0610
ZA 8804170	A	19900228	ZA 1988-4170	1988 0610
BR 8802888	A	19890103	BR 1988-2888	1988 0613

PRIORITY APPLN. INFO.: US 1987-62521 A

1987  
0612

US 1988-161228

B2

1988  
0217

AB The title composition contains a source of available Cl, sufficient alkali to give pH  $\geq 10.5$ , a builder, and a thickening system comprising a synthetic water-soluble polymer, a swellable clay, and multivalent cations. The composition is prepared by mixing the thickening system with water, adding the builder, cooling the slurry, and adding the source of available Cl. The composition is pourable by squeezing or shaking the storage container and is effectively retained in dispensing cups of **dishwashers** during cycles preceding the wash cycle. A composition contained Gelwhite GP 2.0, Acrysol A-3 2.0, NaOH 1.2,  $\text{Al}_2(\text{SO}_4)_3 \cdot 18\text{H}_2\text{O}$  0.2,  $\text{Na}_5\text{P}_3\text{O}_{10}$  21.36,  $\text{Na}_2\text{CO}_3$  7.0, and Na silicate (2.4:1  $\text{SiO}_2$ -Na<sub>2</sub>O) 6.46%, the balance being NaOCl (to give 1.0% available Cl) and water.

IT 7646-85-7, Zinc chloride, uses and miscellaneous  
(thixotropic **liquid detergents** containing, for  
machine **dishwashing**)

RN 7646-85-7 HCAPLUS

CN Zinc chloride ( $\text{ZnCl}_2$ ) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

IC ICM C11D003-395  
ICS C11D003-12; C11D007-10; C11D007-60

CC 46-6 (Surface Active Agents and Detergents)

ST thixotropy **liq detergent dishwasher**;  
thickener **liq detergent dishwasher**;  
polyacrylate thixotropy detergent; clay thixotropy detergent;  
aluminum sulfate thixotropy detergent

IT Thickening agents  
(clay-polymer-metal salt, in **liquid detergents**  
for machine **dishwashing**)

IT Bleaching agents  
(hypochlorite, **liquid detergents** containing, for  
machine **dishwashing**)

IT Bentonite, uses and miscellaneous  
(thixotropic **liquid detergents** containing, for  
machine **dishwashing**)

IT Thixotropy  
(agents, **liquid detergents** containing, for  
machine **dishwashing**)

IT Detergents  
(**dishwashing**, **liquid**, thixotropic agents for,  
for machine use)

IT Carboxylic acids, polymers  
(polymers, thixotropic **liquid detergents**  
containing, for machine **dishwashing**)

IT 1318-93-0, Montmorillonite ( $(\text{Al}_{1.33}\text{-}1.67\text{Mg}_{0.33}\text{-}0.67)(\text{Ca}_0\text{-}1\text{Na}_0\text{-}1)\text{O}_{3.3}\text{Si}_4(\text{OH})_{20}\text{O}_{10} \cdot x\text{H}_2\text{O}$ ), uses and miscellaneous 7446-70-0,  
Aluminum chloride, uses and miscellaneous 7646-78-8, Stannic  
chloride, uses and miscellaneous 7646-85-7, Zinc  
chloride, uses and miscellaneous 7789-45-9, Cupric bromide

9003-01-4, Poly(acrylic acid) 9003-04-7 10043-01-3, Aluminum  
sulfate 10101-53-8 25087-26-7, Poly(methacrylic acid)  
26099-09-2, Poly(maleic acid)  
(thixotropic liquid detergents containing, for  
machine dishwashing)

L72 ANSWER 44 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1989:156592 HCAPLUS  
DOCUMENT NUMBER: 110:156592  
TITLE: Method of cleaning and conditioning marble and  
similar surfaces  
INVENTOR(S): Thrower, John H.  
PATENT ASSIGNEE(S): USA  
SOURCE: Eur. Pat. Appl., 4 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

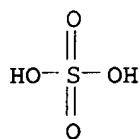
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 290132	A1	19881109	EP 1988-302768	1988 0329
R: CH, DE, ES, FR, GB, IT, LI JP 64003087	A2	19890106	JP 1988-71717	1988 0325
PRIORITY APPLN. INFO.:		US 1987-46762	A	1987 0507

AB Polished marble surfaces, e.g., floors, that have become defaced and scratched are buffed with a ZnSO<sub>4</sub> solution containing an abrasive and a thickener, flushed with water, and buffed (i.e., with a buffer providing a surface pressure of 0.5-1 psi) with an aqueous composition containing Zn and/or alkaline earth metal fluorosilicates and an aliphatic monocarboxylic acid such as AcOH with partial removal of the composition, giving a surface which contains a thin film of Ca fluorosilicate and has a brilliant glasslike finish. The film is more durable than polymer or wax coatings and does not require stripping at a later time.

IT 7733-02-0, Zinc sulfate  
(cleaning compns. containing, for marble  
floors)

RN 7733-02-0 HCAPLUS

CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

IC ICM C04B041-50  
ICS C04B041-53  
CC 46-6 (Surface Active Agents and Detergents)  
Section cross-reference(s): 42  
IT 7733-02-0, Zinc sulfate  
(cleaning compns. containing, for marble  
floors)

L72 ANSWER 45 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1986:499607 HCAPLUS

DOCUMENT NUMBER: 105:99607

TITLE: Automatic dishwasher  
detergent compositionINVENTOR(S): Hartman, Frederick Anthony; Piatt, David  
Michael

PATENT ASSIGNEE(S): Procter and Gamble Co., USA

SOURCE: Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 186234	A2	19860702	EP 1985-202020	1985 1205
EP 186234	A3	19870415		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL				
CA 1278235	A1	19901227	CA 1985-497739	1985 1216
PRIORITY APPLN. INFO.:		US 1984-682387	A	1984 1217

AB A low-sudsing detergent for use in automatic dishwashers comprises  $\geq 1$  detergency builder, Cl bleach, low-foaming nonionic surfactant,  $\geq 1$  alkyl phosphate ester, and a material capable of generating bromide ions. The bromide ions improve the starch removal performance, decreasing the amount of pretreatment necessary for effective cleaning. Thus, a granular detergent comprising nonionic surfactant 4, Na<sub>5</sub>P<sub>3</sub>O<sub>10</sub> 33, Na<sub>2</sub>CO<sub>3</sub> 20, Na dichloroisocyanurate (1.48% available Cl) 2.5, Na<sub>2</sub>SO<sub>4</sub> 16, Na silicate 10, monostearyl acid phosphate 0.2, and NaBr 2.5%, the balance being water and additives, had better cleaning power than

a similar detergent containing no NaBr.

IT 7699-45-8  
(detergents containing, for cleaning power in dishwashers  
)  
RN 7699-45-8 HCAPLUS  
CN Zinc bromide (ZnBr<sub>2</sub>) (9CI) (CA INDEX NAME)

Br—Zn—Br

IC ICM C11D003-395  
ICS C11D001-83; C11D003-04  
CC 46-6 (Surface Active Agents and Detergents)  
ST bromide detergent dishwashing efficiency; starch removal  
bromide dishwashing; sodium bromide detergent  
dishwashing  
IT Detergents  
(dishwashing, for machine use, bromide ions for  
improved cleaning by)  
IT 79-15-2 7647-15-6, uses and miscellaneous 7699-45-8  
7787-70-4 7789-41-5  
(detergents containing, for cleaning power in dishwashers  
)

L72 ANSWER 46 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1986:226774 HCAPLUS  
DOCUMENT NUMBER: 104:226774  
TITLE: Scale-removing detergent compositions  
INVENTOR(S): Uno, Satoru  
PATENT ASSIGNEE(S): Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 61034098	A2	19860218	JP 1984-137817	

1984  
0703

PRIORITY APPLN. INFO.: JP 1984-137817

1984  
0703

AB The title compns., which remove silica scale and Ca scale,  
comprise a B compound, a solution of a F compound, and an inorg. acid.  
Thus, a mixture of H<sub>3</sub>BO<sub>3</sub> 3, HCl 250, and 35% ammonium bifluoride  
solution 50 g dissolved 2g silica-Ca scale completely during 5-30 min.

IT 1332-07-6  
(scale-removing cleaning solns. containing)  
RN 1332-07-6 HCAPLUS  
CN Boric acid, zinc salt (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IC ICM C11D007-04  
ICS C23G001-00; F28G009-00

CC 46-6 (Surface Active Agents and Detergents)  
Section cross-reference(s): 61  
IT 1303-95-3 1330-43-4 1332-07-6 1332-77-0 1341-49-7  
7632-04-4 7647-01-0, uses and miscellaneous 10043-35-3, uses  
and miscellaneous 12007-56-6 12007-60-2 13703-82-7  
(scale-removing cleaning solns. containing)

L72 ANSWER 47 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1985:8651 HCAPLUS  
DOCUMENT NUMBER: 102:8651  
TITLE: Cleaning of a polyamide-soiled equipment  
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59102998	A2	19840614	JP 1982-212619	1982

PRIORITY APPLN. INFO.: JP 1982-212619

1206  
1982  
1206

AB An equipment is contacted with a cleaning solution containing  $\geq 1$  compound selected from polyhydric alcs. and ethanolamines and  $\geq 1$  compd selected from Zn compds. and Sn compds. The method is effective and not harmful to the equipment. Thus, a measuring pump soiled with nylon 6 [25038-54-4] was washed with a cleaning composition comprising 100 parts diethylene glycol [111-46-6] and 3 parts  $\text{ZnCl}_2$  and further washed with water, ultrasonic waves, and water (repeated twice).

IT 7646-85-7, uses and miscellaneous  
(cleaning compns. containing, for removal of  
nylon wastes)

RN 7646-85-7 HCAPLUS

CN Zinc chloride ( $\text{ZnCl}_2$ ) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

IC C11D007-52; B08B003-08; D01D004-04; D01F006-60  
CC 46-6 (Surface Active Agents and Detergents)  
IT 102-71-6, uses and miscellaneous 111-46-6, uses and  
miscellaneous 112-27-6 7646-85-7, uses and  
miscellaneous  
(cleaning compns. containing, for removal of  
nylon wastes)

L72 ANSWER 48 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1983:145480 HCAPLUS  
DOCUMENT NUMBER: 98:145480  
TITLE: Viscous compositions containing amido betaines  
and salts

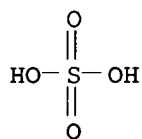


INVENTOR(S): Rubin, Fred K.; Van Blarcom, David  
 PATENT ASSIGNEE(S): Lever Brothers Co., USA  
 SOURCE: U.S., 14 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4375421	A	19830301	US 1981-312439	1981 1019
CA 1186966	A1	19850514	CA 1982-413413	1982 1014
AU 8289408	A1	19830428	AU 1982-89408	1982 1015
AU 550577 NO 8203457	B2 A	19860327 19830420	NO 1982-3457	1982 1018
EP 77674	A2	19830427	EP 1982-305526	1982 1018
EP 77674 R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE	A3	19851218		
JP 58079099	A2	19830512	JP 1982-182695	1982 1018
JP 59052198 BR 8206061	B4 A	19841218 19830913	BR 1982-6061	1982 1018
ZA 8207602	A	19840530	ZA 1982-7602	1982 1018
PRIORITY APPLN. INFO.:			US 1981-312439	A 1981 1019

AB Amido betaines  $RCONH(CH_2)_nN+R_1R_2CH_2CO_2^-$  (R = C9-17 alkyl or alkenyl, n = 2-4, R1 and R2 = C1-4 alkyl), water,  $\geq 1$  water-soluble inorg. or organic salt, and, in some cases,  $\geq 1$  micelle-forming anionic surfactant are used to prepare viscous liqs., pastes, or gels for use in cleansing, toiletry, cosmetic, and other applications. Thus, a gel (viscosity 44000 cP) comprising coconut alkanamido betaine 15, NaHSO4 20, and water 65% was useful as a toilet boil cleaner.

IT 7733-02-0  
 (thickeners, for aqueous amido betaine compns.)  
 RN 7733-02-0 HCAPLUS  
 CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

IC C11D001-90; C11D001-94; C11D003-04; C11D017-08

INCL 252110000

CC 46-6 (Surface Active Agents and Detergents)

IT Detergents

(cleaning compns., amido betaine-containing  
solns., thickeners for)

IT Detergents

(dishwashing, amido betaine-containing solns., thickeners  
for)

IT 68-04-2 127-08-2 127-09-3 150-90-3 151-21-3, uses and  
miscellaneous 497-19-8, uses and miscellaneous 533-96-0  
584-08-7 866-84-2 868-18-8 2235-54-3 3097-08-3 5064-31-3  
7320-34-5 7487-88-9, uses and miscellaneous 7681-38-1  
7722-88-5 7733-02-0 7757-82-6, uses and miscellaneous  
7758-29-4 7758-98-7, uses and miscellaneous 7772-98-7  
7778-80-5, uses and miscellaneous 7783-20-2, uses and  
miscellaneous 9004-82-4 10043-01-3 10043-67-1 10294-26-5  
25155-30-0 27323-41-7 32612-48-9 34128-01-3 37340-60-6  
62755-21-9

(thickeners, for aqueous amido betaine compns.)

L72 ANSWER 49 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1978:107133 HCAPLUS

DOCUMENT NUMBER: 88:107133

TITLE: Method and composition for cleaning polished  
surfaces

INVENTOR(S): Hindle, Peter; Welsh, William James

PATENT ASSIGNEE(S): Procter and Gamble Co., USA

SOURCE: U.S., 6 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4069066	A	19780117	US 1976-739159	1976 1110
DE 2749623	A1	19780511	DE 1977-2749623	1977 1105
FR 2370790	A1	19780609	FR 1977-33818	1977 1109
CA 1086600	A1	19800930	CA 1977-290515	

GB 1587316 A 19810401 GB 1977-46631 1977  
1109  
1977  
1109  
PRIORITY APPLN. INFO.: US 1976-739159 A  
1976  
1110

AB Cleaning compns. are described which contain an amine-derived surfactant, amine impurities introduced with the surfactant, and a water-soluble salt of a metal ion, such as a Zn, Co, or Ni ion, capable of complexing with the amine impurities. The compns. are useful for cleaning the surfaces of hardened coatings of floor polishes containing polyvalent metal ion-crosslinked copolymers of acrylic monomers containing carboxy groups, i.e., the metal salt forms complex with the amine impurities and prevent softening of the crosslinked polish coatings by the amine impurities. Thus, a cleaning composition contained cetyltrimethylammonium bromide 3, 3-(N-C12.8 alkyl-N,N-dimethylammonio)-2-hydroxy-1-propanesulfonate 1.6, ethoxylated (9 mols) C11-15 secondary alcs. 1, perfume 0.5, ZnCl2.0.005, and water 93.895%.

IT 7646-85-7, uses and miscellaneous  
(cleaning compns. containing amine-derived surfactants and, for cleaning floor polish coatings without softening)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

IC B08B003-08

INCL 134006000

CC 46-6 (Surface Active Agents and Detergents)

IT 7646-85-7, uses and miscellaneous  
(cleaning compns. containing amine-derived surfactants and, for cleaning floor polish coatings without softening)

L72 ANSWER 50 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1975:581449 HCAPLUS

DOCUMENT NUMBER: 83:181449

TITLE: Color-changeable detergent composition

INVENTOR(S): Kobayashi, Takehiko

PATENT ASSIGNEE(S): Japan

SOURCE: Jpn. Tokkyo Koho, 2 pp.

CODEN: JAXXAD

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 50018482	B4	19750630	JP 1969-37413	1969 0516

## PRIORITY APPLN. INFO.:

JP 1969-37413

1969  
0516

AB Detergent powders were prepared which contain a metal salt and another component which reacted in water to give colored washing solns. The salt, the other component, or both were coated with a water-resistant material. Thus, 0.3 g zincon [135-52-4] in EtOH was adsorbed on powdered silica, EtOH was evaporated, and the particles were coated with 2 g polyethylene glycol and **mixed** with **detergent** powder and ZnCl<sub>2</sub> [7646-85-7] to prepare a powder which gave a blue washing solution at pH 5-10.

IC C11D

CC 46-1 (Surface Active Agents and **Detergents**)

L72 ANSWER 51 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1975:430336 HCAPLUS

DOCUMENT NUMBER: 83:30336

TITLE: Washing composition

INVENTOR(S): Dekker, Bob; Winton Murray, Mathew

PATENT ASSIGNEE(S): Procter and Gamble European Technical Center, Belg.

SOURCE: Ger. Offen., 29 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
DE 2445710	A1	19750410	DE 1974-2445710	1974 0925
NL 7413220	A	19750411	NL 1974-13220	1974 1008
FR 2246630	A1	19750502	FR 1974-33824	1974 1008
GB 1438417	A	19760609	GB 1974-43523	1974 1008
BE 820862	A2	19750409	BE 1974-149353	1974 1009

## PRIORITY APPLN. INFO.:

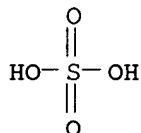
LU 1973-68583

A

1973  
1009

AB Detergents for washing glass, **dishes**, etc. were prepared which contained C<sub>16</sub>H<sub>33</sub>O<sub>2</sub>CCH(CO<sub>2</sub>Na)CH(PO<sub>3</sub>Na<sub>2</sub>)CO<sub>2</sub>C<sub>16</sub>H<sub>33</sub> (I) [55525-37-6], (NaO<sub>2</sub>CCH<sub>2</sub>)<sub>2</sub>(NaO<sub>3</sub>S)CC(O)CH(CH<sub>2</sub>CO<sub>2</sub>Na)CH<sub>2</sub>CO<sub>2</sub>C<sub>12</sub>H<sub>25</sub> [55525-38-7], or H(OC<sub>2</sub>H<sub>4</sub>)<sub>6</sub>O<sub>2</sub>CCH<sub>2</sub>C(CO<sub>2</sub>Na)(SO<sub>3</sub>Na)CH<sub>2</sub>CO<sub>2</sub>Na [55525-39-8] and SnCl<sub>2</sub> [7772-99-8], ZnSO<sub>4</sub> [7733-02-0], or KAl(SO<sub>4</sub>)<sub>2</sub> [10043-67-1]. Thus, a detergent comprised Na C<sub>12</sub>-14 alkanesulfonate 8, R(OC<sub>2</sub>H<sub>4</sub>)<sub>3</sub>SO<sub>4</sub>Na (R = C<sub>12</sub>-16 alkyl) 4, ditallowdimethylamine oxide 4, SnCl<sub>2</sub> 0.3, I 12, Na citrate 4, Na cumenesulfonate 8, and water 59%.

IT 7733-02-0  
 (detergents containing, for glass and dishes)  
 RN 7733-02-0 HCAPLUS  
 CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

IC C11D  
 CC 46-6 (Surface Active Agents and Detergents)  
 ST detergent glass **dishwashing**; carboxylate detergent  
**dishwashing**; phosphonate carboxylate detergent  
**dishwashing**; sulfocarboxylate detergent  
**dishwashing**; metal salt detergent **dishwashing**  
 IT Glass  
 (cleaning compns. for)  
 IT Detergents  
 (for glass and dishes)  
 IT 7733-02-0 7772-99-8 10043-67-1 55525-37-6  
 55525-38-7 55525-39-8  
 (detergents containing, for glass and dishes)

L72 ANSWER 52 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1973:407185 HCAPLUS  
 DOCUMENT NUMBER: 79:7185  
 TITLE: Alkaline cleaning compositions for  
 flame-exposed boiler surfaces  
 INVENTOR(S): Moyer, Hans  
 PATENT ASSIGNEE(S): Meyer, Hans, Waerme- und Wassertechnische  
 Analgen  
 SOURCE: Ger., 3 pp.  
 CODEN: GWXXAW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 2234172	B1	19730426	DE 1972-2234172	1972 0712
DE 2234172	C2	19750327		
US 3910854	A	19751007	US 1973-376675	1973 0705
AT 323503	B	19750710	AT 1973-6113	1973 0711
PRIORITY APPLN. INFO.:		DE 1972-2234172	A	

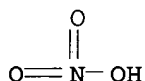
1972  
0712

AB Improved title compns. based on NaOH or KOH and Na or K metasilicates contained 3% zinc nitrate [7779-88-6] and 5% aqueous (25%) ammonium hydroxide [1336-21-6].

IT 7779-88-6  
(cleaning compns., containing, for boilers, for corrosion prevention)

RN 7779-88-6 HCAPLUS

CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

IC C23G

CC 46-6 (Surface Active Agents and Detergents)

IT 7779-88-6  
(cleaning compns., containing, for boilers, for corrosion prevention)

L72 ANSWER 53 OF 53 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1972:115233 HCAPLUS

DOCUMENT NUMBER: 76:115233

TITLE: Bleaching, sterilizing, disinfecting, and deterging compositions

INVENTOR(S): King, Thomas M.

PATENT ASSIGNEE(S): Monsanto Co.

SOURCE: U.S., 8 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

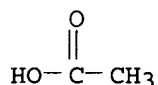
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3629124	A	19711221	US 1969-853512	1969 0827
PRIORITY APPLN. INFO.:				US 1969-853512 A 1969 0827

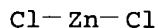
AB Threshold-sequestering capabilities were imparted to a Cl-releasing agent, e.g. sodium hypochlorite [7681-52-9], by addition of an amino phosphonic acid, e.g. [nitrilotris(methylene)]triphosphonic acid [6419-19-8]. A stabilizer, e.g. zinc sulfate [7733-02-0], was added to prevent chemical interaction between the Cl compound and the acid. The compns. were used in household bleaching, sterilizing, disinfecting, and cleansing compns.

IT 557-34-6 7646-85-7, uses and miscellaneous  
 7733-02-0 7779-88-6  
 (stabilizers, for bleaching agent-sequestering agent-containing  
 detergent compns.)  
 RN 557-34-6 HCAPLUS  
 CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)

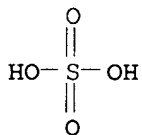


● 1/2 Zn

RN 7646-85-7 HCAPLUS  
 CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

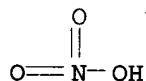


RN 7733-02-0 HCAPLUS  
 CN Sulfuric acid, zinc salt (1:1) (8CI, 9CI) (CA INDEX NAME)



● Zn

RN 7779-88-6 HCAPLUS  
 CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

IC C11D  
 INCL 252099000  
 CC 46 (Surface Active Agents and Detergents)  
 IT 139-12-8 557-34-6 3251-23-8 7447-39-4, uses and  
 miscellaneous 7646-85-7, uses and miscellaneous  
 7733-02-0 7779-88-6 10124-36-4 13473-90-0  
 (stabilizers, for bleaching agent-sequestering agent-containing  
 detergent compns.)

